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DR. R. GREY'S

MEMORIA TECHNICA,

OR METHOD OF

ARTIFICIAL MEMORY,

Applied to and exemplified in

| | | |
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| CHRONOLOGY, | | GEOGRAPHY, |
| HISTORY, | | ASTRONOMY. |

ALSO,

JEWISH, GRECIAN, AND ROMAN COINS,
WEIGHTS, MEASURES, &c.

TO WHICH ARE SUBJOINED,

LOWE'S MNEMONICS

DELINEATED,

IN VARIOUS BRANCHES OF LITERATURE AND SCIENCE.

A NEW EDITION, CORRECTED.

OXFORD,

PRINTED FOR J. VINCENT:

G. B. WHITTAKER; SIMPKIN and MARSHALL; and J. DUNCAN,
London.

1824.

OF H. GREY'S
MEMORIA TECHNICA.

ARTIFICIAL MEMORY.



JEWISH, GREEK, AND ROMAN COINS,
WEIGHTS, MEASURES, &c.

LOWE'S WEAPONS.

BY VARIOUS FRANCHISES OF THE WATER AND CLOTH.

OXFORD.

PRINTED BY J. H. B. HARRIS, AND J. DUNCAN.

PREFACE.

IT may be proper to acquaint the reader with what improvements have been made in this work since its first publication. In the tables of the patriarchs and ancient kings, care has been taken to signify, with the utmost brevity, the relation which every person bore to his immediate predecessor. In the geographical part, besides the adding of many remarkable places both in ancient and present geography, the memorial lines for the general and particular divisions have many of them been formed anew, with particular regard to the situation of the respective kingdoms, provinces, or countries into which those divisions have been made; so that every line is in some measure the epitome of a map. The tables of ancient coins, weights, and measures have been carefully reviewed, and very much augmented; and decimal tables subjoined, of great use for the more speedy and exact reduction of them. There is likewise added an Index of the historical, chronological, and geographical words; of the usefulness of which is given an account in the proper place. Besides these, there are several alterations and additions of less moment, interspersed throughout the whole; such as either my own experience or the judgment of my friends had suggested to me, in order to render the design more useful. I shall not trouble the reader with the reasons of them, which, if he compares the editions, he will very probably find out himself: nor do I think it necessary to apologize for having made them, since it could not be expected that an invention of this kind

should be so perfect at first, as not to be capable of being considerably improved. And I was the more willing to bestow some care and pains upon it, and to give it what improvement I was able, in return for the favourable reception it has met with from the public, beyond what was expected by myself or others. An Art of Memory has by many been looked upon as a thing either in itself impracticable, or, at least, in the common methods of it, useless and trifling. And I was sensible that the following method would lie under the additional disadvantage of a whimsical and out of the way appearance; besides that, the seeming difficulty of it at first sight would, I foresaw, deter many from so much as attempting to make themselves masters of it. Notwithstanding these discouragements, it has had the good fortune to give some satisfaction, and to meet with some success; and will, I hope, continue to be looked upon as an useful help to those who delight in reading, and would retain what they had read with faithfulness and accuracy, particularly in such points wherein their memories are most likely to fail them.

The objections which have been made to it from the difficulty of remembering the memorial lines would most effectually be removed by habituating young minds to them betimes, by the frequent transcribing and repetition of them. The technical words would by this means become natural and familiar, and of no small advantage to them in the course of their future studies; they would be easily received and long retained. But I shall say no more upon this point, having already touched upon it in the Introduction; to which also I refer the reader for what might further be expected by way of Preface.

INTRODUCTION.

IT is a general complaint amongst men of reading, and to many a discouragement from it, that they find themselves not able to *retain* what they read with any certainty or exactness. And in no part of literature is there greater room for this complaint than in *History*: to the studying of which with pleasure and improvement, as nothing contributes more, so nothing has been thought more difficult to be *retained*, than a distinct and accurate knowledge of *Chronology* and *Geography*. Upon this account several attempts have been made to remedy, in some measure, the defects of the memory, by chronological and geographical tables, cuts, and maps, and by reducing the principal parts of history to certain epochas or æras, so disposed and contrived, as may be most likely to affect the imagination, and make the deeper impression upon the mind. Thus Mr. Hearne, in his *Ductor Historicus*, has reduced the whole compass of chronology to thirteen grand epochas, all beginning with the letter C. Dean Prideaux, in his *Introduction to History*, has made use of the number seven, throughout his whole book; “not out of affection (as he tells us) but experience, as *most easy for the memory*,” with others of the like nature, which serve at least to shew that the memory wants assistance, and that small helps are better than none. But of all the inventions made use of for this end, none has been found to contribute more to the assistance of the memory than that of *technical verses*; both as they generally contain a great deal in a little compass, and also because being once learned, they are seldom or never forgot. For the truth of which I may venture to appeal to the weakest memories, whether they have

not to the last found themselves in possession of that ever-memorable line,

Barbara Celarent Darii Ferio Baralip-ton.

Of this nature is the following method ; the design of which is, not to make the *memory better*, but *things more easy to be remembered* ; so that by the help of it, an ordinary, or even a weak memory, shall be able to retain what the strongest and most extraordinary memory could not retain without it. For, as he, who first contrived to assist the eye with a telescope, did not by that pretend to give sight to the blind, or make any alteration in the eye itself, but only to bring the objects nearer, that they might be viewed more accurately and distinctly ; so neither is it pretended ^a by this art to teach those to remember every thing who never could remember any thing ; or to make men in an instant skilful in sciences which before they were utterly unacquainted with ; but only to enable them to retain, with *certainty* and *exactness*, what they have already a general and competent knowledge of : that they may not be obliged upon every occasion to have fresh recourse to their books or maps, or be under the tiresome necessity of reading the same things again and again, still forgetting them as fast as they read them.

To those who may object, of what use is it to be thus exact, and content themselves with an imperfect and confused remembrance of what they read ; it might be answered, that such as think it of no use, need not, as I presume they will not, trouble themselves about it ; this being designed for the benefit of those only who think it is of use ; and who, even at the expence of a little pains, would remember if they could : but, besides this, I believe it will be agreed on all hands, that to instance in history only, a man who *has* an exact notion of time and place, finds incomparably

^a Hæc ars tota habet hanc vim, non ut totum aliquid cujus in ingeniis nostris pars nulla fit, pariat et procreet ; verum ut ea, quæ sunt orta jam in nobis et procreata, educat atque confirmet. *Cicero de Oratore*, lib. ii. edit. C. Steph. p. 182.

more pleasure, and makes a speedier progress in that study, than he who *has not*.

I shall here beg leave to transcribe a passage from ADDISON's *Dialogues, upon the Usefulness of Ancient Medals*: "There is one advantage, says Eugenius, that seems to me *very considerable*, which is the great help to memory one finds in medals: for my own part, I am very much embarrassed in the names and ranks of the several Roman emperors, and find it difficult to recollect upon occasion the different parts of their history: but your medallists, upon the first naming of an emperor, will immediately tell you his age, family, and life. To remember where he enters in the succession, they only consider, in what part of the cabinet he lies; and by running over in their thoughts such a particular drawer, will give you an account of all the remarkable parts of his reign."

If this be such a *considerable advantage* in medals, I hope it will be allowed that the following method is of some use, since by it a man may be enabled to remember when any emperor, from Julius Cæsar to Jovian, began his reign, and that as readily as you can name him, by the help of no more than *seven memorial lines*. The like he may do, with the same ease and readiness, by the kings of England, and so proportionably for any other part of sacred or profane history. For, how impracticable soever it may seem at first view, I have reason to believe, that any reader of a common capacity may, by a regular proceeding and ordinary application, be able readily and exactly to answer *most*, if not *all*, the questions that can be proposed, from the following tables.

The manner in which I would advise him to proceed (after having premised that he must not be too hasty at first, but make himself^b master of one thing

^b Assumendus usus paulatim, ut pauca primum complectamur animo quæ reddi fideliter possint: mox per incrementa tam modica ut onerari se labor ille non sentiat, augenda usu et exercitatione multa continenda est, quæ quidem maxima ex parte memoria constat. *Quintilianus*, lib. x. edit. Gibson. Ox. p. 534.

before he proceeds to another, beginning with such particulars as he has most occasion or inclination to retain) is this. First, let him learn to *explain* the several *memorial lines*, according to the method hereafter to be laid down, by consulting the tables to which they belong. 2. This done, let him, by looking upon the tables, learn to make out the lines; and 3. Let him charge his memory with them, by *frequent repetition*. By this means the words will become *familiar*, how harsh and uncouth soever they may appear at first; and he will find it as easy to know the diameter, distance, and magnitude of any planet; the particular time or age of any remarkable person or thing; the longitude and latitude of any place, and the like, as it is to remember their *names*: the whole art being in effect nothing more than this; *to make such a change in the ending of the name of a place, person, planet, coin, &c. without altering the beginning of it, as shall readily suggest the thing sought, at the same time that the beginning of the word, being preserved, shall be a leading or prompting syllable to the ending of it so changed.*

I would willingly here let the reader a little more into my meaning, which he may not otherwise so readily apprehend, lest he should think there is more difficulty in the matter than there really is. I would ask him, then, if he thinks he could remember to call CYRUS, *Cyruts*; DANIEL, *Daniull*; ALEXANDER the Great, *Aléxita*; JULIUS Cæsar, *Julios Cæsar*; or MAHOMET, *Máhomaudd*. If he can but do this, he has nothing else to do (when he is once master of the general key, and knows what letters of the alphabet stand for what figures) in order to remember, without any possibility of being mistaken, that the years in which Cyrus, Alexander, and Julius Cæsar founded their respective monarchies, were as follow:

| | Before Christ |
|--------------------------------|---------------|
| CYRUS [<i>Cyruts</i>] | 536 |
| ALEXANDER [<i>Aléxita</i>] | 331 |
| JULIUS Cæsar [<i>Julios</i>] | 46 |

And that the Mahometan æra, or flight of Mahomet,

was A. D. 622.—In like manner for Geography. Does he think he could remember to call MADRID *Madroy-t*, or JERUSALEM *Jeruta-ts*, or BLENHEIM *Blenhebav*, or THESSALY *Thessjan*? This is all that is required, to remember that the degree of latitude of Madrid is about 40, and the longitude about 3. The latitude of Jerusalem about 31, and the longitude 36; that Blenheim is in *Bavaria*, and that what was the ancient Thessaly is the present *Janna*. Thus the reader will observe, that all that he has to do, is for one word to remember another, which only varies from it a little in the *termination*^d. And to make even this easier to be remembered, the *technical* words are thrown into the form of common Latin verse, or at least of something like it. For as there was no necessity to confine myself to any rules of *quantity* or *position*, I hope I need make no apology for the liberty I have taken in having, without regard to either, and perhaps now and then without so much as a regard to the just number of feet, only placed the words in such order as to make them run most easily off the tongue, and succeed each other in the most natural manner. But this by the way for the reader's encouragement.

In the mean time, till he can repeat the *memorial lines*, and to those who are not willing to give themselves any trouble at all in charging their *memory* with them, the *tables* themselves will not be without their use; of which it may be expected that I should give some account.

^c The reader is presumed to be so far acquainted with geography, as to be able to tell which is eastern and which is western longitude, when he is informed that the first meridian is fixed at London.

^d In many words the variation is very small: as K. John K. *Jann*, INACHUS *Inakus*, SOLON *Solun*, HERODOTUS *Herodofus*, PLATO *Platok*, TRAJAN *Trajank*, CLEOPATRA *Cleopatla*, GORDIAN *Gordin*, the battle of MARATHON *Marathonz*, ATTILA *Attifla*, CRÆSUS *Crœsuse*, AUSTIN *Austins*, &c. Those which appear more difficult will be full as easy, when familiarised by use.

For the chronology and history I have chiefly consulted *Archbishop Usher's Annals, Marshall's Chronological Tables, the *Rationarium Temporum* of Petavius, Mr. Hearne's *Ductor Historicus*, and Bishop Beveridge's *Institutiones Chronologicae*. The succession of the Assyrian and Babylonian Monarchs, the Kings of Persia, Media, Syria, Egypt, &c. are taken from Dr. Prideaux's Chronological Tables, at the end of his Connection; the times of the flourishing of the Fathers, Heretics, Councils, &c. from Dr. Cave's *Historia Literaria*. The Roman Emperors, and the time of writing of the canonical books of the New Testament, from Mr. Eachard's Roman and Ecclesiastical Histories. The Legatine and Provincial Constitutions from Bishop Gibson's *Codex Juris Ecclesiastici*. The astronomical calculations are from Dr. Derham's Astro-Theology. I have also added Mr. Whiston's, from his Theory of the Earth. In the geographical part, my chief guide has been Dr. Wells's Treatise of Ancient and Present Geography, whose Maps may be consulted by the learner. For the coins, weights, and measures, I have chiefly been obliged to Dr. Arbuthnot's books and tables, not without consulting Bishop Cumberland, Dr. Bernard, and Bishop Hooper, and other writers upon that subject, of whom I have made what use I thought convenient. If any prefer other authors, who differ from these, they may easily apply the art to their favourite author, by a change of the words, according to the method laid down. And, indeed, when the reader is perfectly master of it, he would do well to form words for his own use, which perhaps he will sooner remember than those which I had formed for mine; my design being rather to give a specimen of what might be done by

* It may be some satisfaction to the reader to know, that Mr. Bedford (as he tells us in the Preface to his Scripture Chronology) *never* differs from Dr. Prideaux; and even from the creation of the world to the destruction of Jerusalem, never above five years from Archbp. Usher, the late Bishop of Worcester, or Mr. Marshall.

it, than a set of *complete* tables in the respective sciences. If some think I have been deficient in leaving out what they think worthy of remembering, others perhaps will think I have been too full. To both these I answer, that I impose no task upon my readers, nor desire to prevent their own improvements: they may add what they please, and pass by what they please. Nor do I think it at all necessary that they should be able to answer *every* particular in the following tables; only this I may venture to affirm, that if they once charge their memory with them, they will find them no burden, and that it is not only practicable, but easy to be done.

It is not to be expected that gentlemen, who have gone through the course of their studies, will trouble themselves to begin again anew, and go regularly through the *whole*; but it is submitted to those who have the education of young students in the universities and public schools, whether it would not be of some service towards facilitating the progress of their pupils and scholars in useful knowledge, to have them early and thoroughly acquainted with this small treatise. It is the advice of Quintilian, that boys should be used to repeat, as fast as possible, harsh and crabbed words and verses, purposely made difficult, in order to give them a more full and articulate pronunciation. His words are these: *f Non alienum fuerit exigere ab his ætatibus, quo sit absolutius os et expressior sermo, ut nomina quædam versusque affectatæ difficultatis, ex pluribus asperrime coëuntibus inter se syllabis catenatos et veluti confragosos quam citatissime volvant.* The frequent repetition of the following memorial lines would certainly answer *this* end, and at the same time a *much better*; and if I might also recommend, as he does, the *writing* of them too, in order to make the deeper impression, it would doubtless have a good effect, and boys would be treasuring

f Institutiones Orat. edit. Gibson. Oxon. p. 12.

up learning even before they were aware of it. *ε Illud non pœnitebit curasse cum scribere nomina puer (quem-admodum moris est) cœperit, ne hanc operam in vocabulis vulgaribus et forte occurrentibus perdat. Protinus enim potest interpretationem linguæ secretioris quam Græci γλώσσας vocant, dum aliud agitur, ediscere, et inter prima elementa consequi rem postea proprium tempus desideraturam.* It may be sufficient to have just hinted these things to those whose more immediate province it is, and who are best qualified to judge what methods may most effectually contribute to the improvement of those under their care.

From the account I have given of it, the reader will observe, that the method here proposed is perfectly different from that of Simonides the Cean^h, so famous among the ancients for being the first inventor of an art of memory, ⁱ of whom both Tully and Quintilian speak with respect, and of whose method of ^k places and images (i. e. of having a repository

^ε Quintil. Institutiones Orat. edit. Gibson. Oxon. p. 12.

^h Σιμωνίδης ὁ Λεωπρέπας, ὁ Κεῖος, ὁ τὸ ΜΝΗΜΟΝΙΚΟΝ ΕΥΡΩΝ, ἐνίκησεν Ἀθῆνῃσιν διδάσκων, καὶ αἱ εἰκόες ἐξάθνησαν Ἀρμόδιῳ καὶ Ἀριστογείτονος, ἔτη ΗΗ.—Marm. Arund. i. l. 70.

De Simonide hoc vide Joannem Tzetzem, Chiliade i. cap. 24. Ubi victorias reportasse ait quinquaginta sex. Consule etiam Valerium Maximum, lib. iv. cap. 7.

ⁱ Non sum tanto ego, inquit, ingenio quanto Themistocles fuit ut oblivionis artem quam memoriæ malim; gratiamque habeo Simonidi illi Ceio quem primum ferunt artem memoriæ protulisse. *Cicero de Oratore*, lib. ii.

^k Constat artificiosa memoria locis et imaginibus, &c. *Cicero ad Herennium*, lib. iii. edit. Car. Steph. p. 30.

Loca discunt quam maxime spatiosa, multa varietate signata, domum forte magnam, et in multos diductam recessus. In ea quicquid notabile est animo diligenter affigitur, ut sine cunctatione ac mora partes ejus omnes cogitatio possit percurrere.—

—Tum quæ scripserunt, vel cogitatione complectuntur, et alio signo quo moneantur, notant. Quod esse vel ex re tota potest, ut de navigatione, militia: vel ex verbo aliquo. Nam etiam excidentibus, unius admonitione verbi in memoriam reponuntur: sit autem signum navigationis, ut anchora; militiae, ut aliquid ex armis. Hæc itaque digerunt: primum sensum vel locum vestibulo quasi assignant, secundum atrio, tum impluvia circumeunt, nec cubiculis modo aut exedris, sed stratis etiam similibusque per

of ideas, a large house, or the like, divided into several apartments, in each of which you are to place in order a symbolical representation of the things which you would remember) they have given us a very full and particular account, as also of the occasion which first gave rise to it. What improvements have been made of this method by some modern authors, or in what manner or with what success others have set up to teach privately the art of memory, I am altogether ignorant. Having found my own method sufficient for myself, I had no inclination to look after any other. What use it may be of to the public, must be left to experience. The novelty of it may perhaps recommend it to the inquisitive and curious; and I desire nothing more than that into whose hands soever it may fall, they would not be prejudiced against it upon the account of its *seeming difficulty*, before any have made *trial* of it; being inclined to think, that to any one, who is at all acquainted with it, it will be found to be so far from being *really* difficult, that nothing can be more easy, or more obvious. The representation of numbers by letters of the alphabet hath been a thing in practice, more or less, almost in every language. The only thing wanting was to make that representation further useful, by substituting vowels, as well as consonants, for the numerical figures, in such manner and proportion, that any number might be formed into a word capable of being articulately pronounced, and consequently more perfectly remembered. Amongst the Jews indeed, of whose alphabet the vowels are no part, it was a practice, not only to abbreviate sentences and names of many words, by putting together the initial letters of those words, and making out of them an

ordinem committunt. Hoc facto, cum est repetenda memoria, incipiunt ab initio loca hæc recensere, et quod cuique crediderunt, repossunt, et eorum imagine admonentur, &c. *Quintiliani Institutiones Orat.* lib. xi. edit. Gibson. p. 561.

*artificial word*¹ to express the whole; but also to make use of *natural* words, to represent numbers, when they could meet with such as happened to answer the number they wanted to express. We have several pieces of ingenuity of this kind in the frontispieces of their Bibles, where they give us the *year* of the edition in some word or sentence of Scripture, the letters of which, according to their numerical value, make up the date. I have subjoined^m some of them for the entertainment of the learned reader, from Bishop

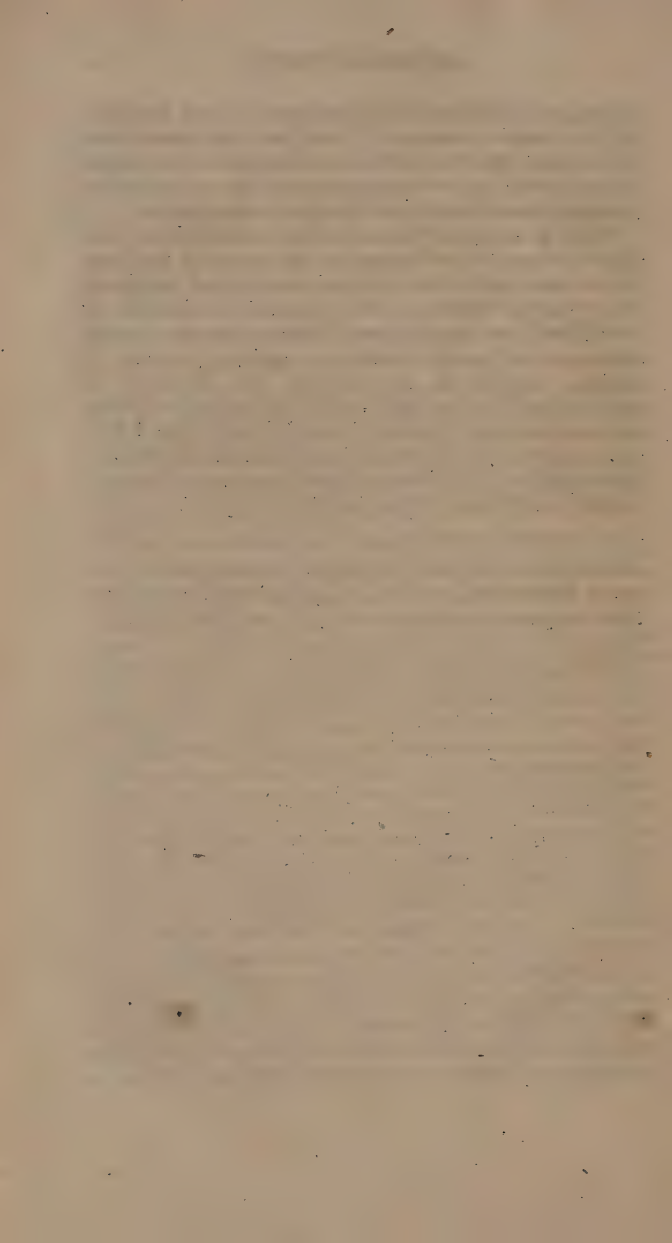
¹ As *Rambam* for R-abbi M-oses B-en M-aimon; *Rulbag* for R-abbi L-evi B-en G-erson; *Maccabees*, from the abbreviation of the words in the standard of Judas Maccabæus, M-i C-amoka B-aëlim J-ehovah, i. e. *Who is like unto thee amongst the gods, O Lord!* See Prideaux's Connection, part ii. book 3. Of this nature is what the reader will meet with in the beginning of the geographical part of this method, page 48, &c.

^m Sed non omittendum est, Judæos in librorum præcipue titulis, ad annum quo impressi sunt indigitandum, literas numerales alio atque quem tradidimus ordine collocare. Enimvero vocem unam vel plures, easque vel seorsim, vel in sententia aliqua Biblica comprehensas excogitant, quarum literæ utut dispositæ numerum propositum valeant. Ex. gr. In Bibliis Sacris a Josepho Athia Amstelodami editis, tria occurrunt frontispicia, unum ad Pentateuchum, ad Prophetas alterum, tertium ad Hagiographa. Primum impressum dicitur **שנת לשני עט ספר מהיר לפק** Anno computi minoris *lingua mea est stylus scribæ prompti*. Ps. xlv. Ubi voces **עט ספר** ut virgulis superne notatæ annum indigitant quo Pentateuchus impressus fuit. Quotus autem fuit annus computi Judaici minoris statim inveniatur, si omnes vocum instarum literæ una cum numerico earum valore ita disponantur, **ע 70 ט 9 ס 60 פ 80 ר 200. = 419**. Ergo annus erat 419 juxta computum Judæorum minorem, de quo videsis chronologicas nostras institutiones, Sic et prophetæ impressi dicuntur **כשנת משא ני חוין לפק** Anno *Onus vallis visionis* computi minoris. Is. xxii. Ubi literæ **חוין משא ני חוין** valent 420. Frontispicium autem ad **כתובים** sive Hagiographa impressum est anno **כתובים באצבע אלהים** scripta Digito Dei, ubi primæ duæ literæ vocis **כתובים** annum eundem 420 significant. Nam **ת** valet 400, et **כ** 20. Hunc etiam in modum Talmud Basileæ impressum dicitur **שנת פדות שלח לעמי** Anno *redemptionem misit populo suo*. Ps. cxi. Ubi literæ vocis **שלח** valent 338. Denique Seder Tephilloth Hispaniensis

Beveridge's *Arithmeticae Chronologica*. And indeed I am not certain whether I owe not to observations of this kind, the first hint of this method, which I have carried so far, and which doubtless, like all other inventions, is still capable of further improvements.

What is added of the miscellany kind, is a small part of what I had drawn up for my own use, and shews how easily this art may be applied to almost every part of learning. If upon the whole this attempt shall be found to contribute to the more speedy attainment of useful knowledge, and to give men of reading, instead of an imperfect and confused remembrance of what they read, a satisfactory certainty and exactness, as I cannot think the little time I have spent upon it ill bestowed in respect of my own improvement, so I shall be glad that it proves of as much benefit to others as I have found it to myself.

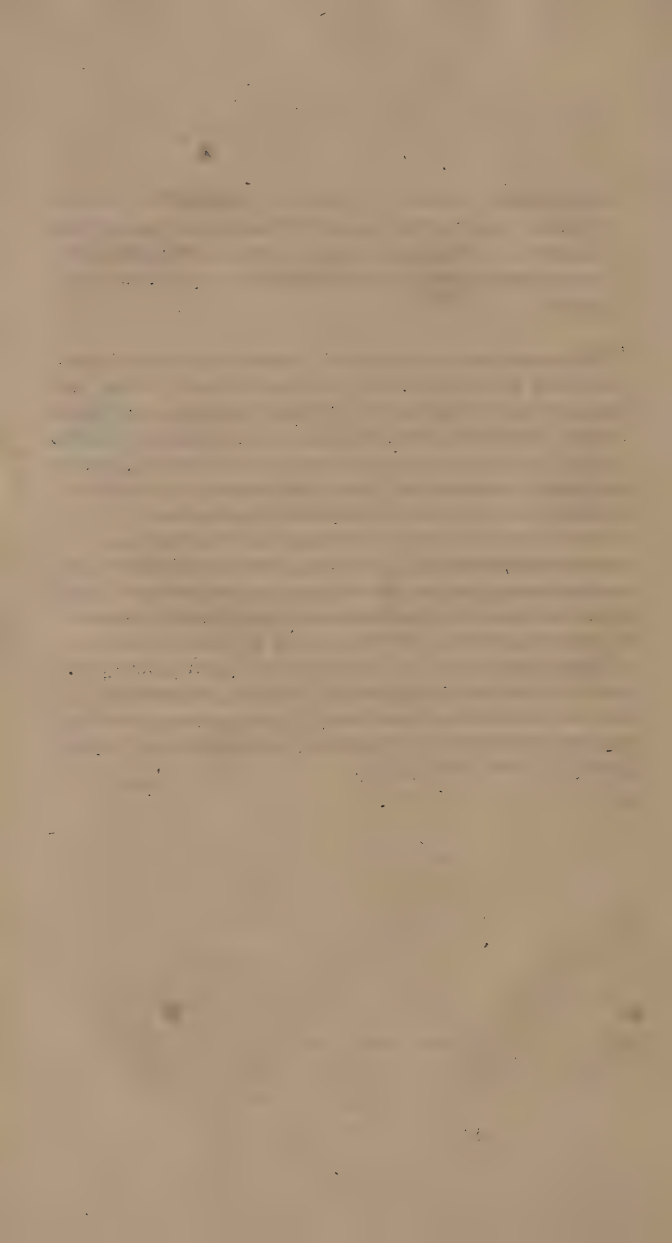
sive Judæorum Hispanorum liturgia ingeniosissime impressa dicitur שנת ה'ת"א Hoc Anno, i. e. Annò 413, quem literæ ה'ת"א indignant. Lib. i. c. 6. p. 211, 212. 4to. 1669.



Recommendatory Character of GREY'S MEMORIA TECHNICA, written by the Reverend Mr. Lawson, some years Head Master of a Foundation Grammar School, at Wolverhampton; given in the preface of a work published by him for the use of his pupils.

THE probable reasons why GREY'S MEMORIA TECHNICA has not been more generally received in Grammar Schools, where any separate regard is paid to History and Chronology, are, that it abounds with matter which has not a strict relation to classical authors, and that it is extended to branches of knowledge, such as Geography, Astronomy, &c. where the necessity of the art is not so evident, and the difficulty of application much greater.

In defence of this art as a subsidiary aid to young persons in History and Chronology, I will not say, that by the help of it the weakest memory may be able to retain what the strongest could not retain without it; but I have no scruple in recommending it to those who wish to avoid the necessity of perpetual recurrence to chronological maps or tables, and who prefer accuracy and fidelity to confused recollection and imperfect remembrance. It does not indeed confer a new faculty, but it teaches us to manage with skill the capacity of the memory, and contrives such helps as greatly assist its natural powers.



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MEMORIA TECHNICA.

SECTION I.

THE principal part of this method is briefly this to remember any thing in history, chronology, geography, &c. a word is formed, the beginning whereof being the first syllable or syllables of the thing sought, does, by frequent repetition, of course draw after it the latter part, which is so contrived as to give the answer. Thus, in history, the Deluge happened in the year before Christ two thousand three hundred forty-eight; this is signified by the word *Deletok*: *Del* standing for *DELuge*, and *etok* for 2348. In astronomy, the diameter of the sun (*Solis Diameter*) is eight hundred twenty-two thousand one hundred and forty-eight English miles; this is signified by *Soldiked-áfei*; *Soldi* standing for the diameter of the sun, *ked-áfei* for 822,148; and so of the rest, as will be shewn more fully in the proper place. How these words come to signify these things, or contribute to the remembering them, is now to be shewn.

The first thing to be done is to learn exactly the following series of vowels and consonants, which are to represent the numerical figures, so as to be able, at pleasure, to form a *technical* word, which shall stand for any number, or to resolve a word already formed into the number which it stands for:

| | | | | | | | | | |
|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|----------|
| <i>a</i> | <i>e</i> | <i>i</i> | <i>o</i> | <i>u</i> | <i>au</i> | <i>oi</i> | <i>ei</i> | <i>ou</i> | <i>y</i> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <i>b</i> | <i>d</i> | <i>t</i> | <i>f</i> | <i>l</i> | <i>s</i> | <i>p</i> | <i>k</i> | <i>n</i> | <i>z</i> |

Here *a* and *b* stand for 1, *e* and *d* for 2, *i* and *t* for 3, and so on.

See also other signs at page 4.

MEMORIA TECHNICA.

These letters are assigned arbitrarily to the respective figures, and may very easily be remembered. The first five vowels in order naturally represent 1, 2, 3, 4, 5. The diphthong *au*, being composed of *a* 1 and *u* 5, stands for 6; *oi* for 7, being composed of *o* 4 and *i* 3; *ou* for 9, being composed of *o* 4 and *u* 5. The diphthong *ei* will easily be remembered for eight, being the initials of the word. In like manner for the *consonants*, where the initials could conveniently be retained, they are made use of to signify the number; as *t* for three, *f* for four, *s* for six, and *n* for nine. The rest were assigned without any particular reason, unless that possibly *p* may be more easily remembered for 7 or *Septem*, *k* for 8 or *ἑκτὼ*, *d* for 2 or *duo*, *b* for 1, as being the first consonant, and *l* for 5, being the Roman letter for 50, than any others that could have been put in their places.

The reasons here given, as trifling as they are, may contribute to make the series more readily remembered; and if there was no reason at all assigned, I believe it will be granted that the representation of nine or ten numerical figures by so many letters of the alphabet, can be no great burthen to the memory.

The series therefore being perfectly learned, let the reader proceed to exercise himself in the formation and resolution of words in this manner:

| | | | | | | | |
|------------|------------|-------------|-------------|-------------|-------------|------------|---------------|
| 10 | 325 | 381 | 1921 | 1491 | 1012 | 536 | 7967 |
| <i>az</i> | <i>tel</i> | <i>teib</i> | <i>aneb</i> | <i>afna</i> | <i>bybe</i> | <i>uts</i> | <i>pousoi</i> |
| 431 | 553 | 680 | &c. | | | | |
| <i>fib</i> | <i>lut</i> | <i>seiz</i> | &c. | | | | |

And as, in numeration of larger sums, it is usual to point the figures at their proper periods of thousands, millions, billions, &c. for the more easy reading of them, as 172,102,795, one hundred seventy-two millions, one hundred two thousand, seven hundred ninety-five; so, in forming a word for a number consisting of many figures, the syl-

lables may be so conveniently divided, as exactly to answer the end of pointing. Thus, in the instance before us, which is the diameter of the orbit of the earth in English miles, the *technical* word is *Dorbterboid-áze-poul*; the beginning of the word, *Dorbter*, standing for the diameter of the orbit of the earth, (*D-i-ame-ter ORBITÆ TERRÆ*,) and the remaining part of it, *boid-áze-poul*, for the number 172,102,795.

N. B. Always remember that the diphthongs are to be considered but as *one letter*, or rather, as representing only *one figure*. Note also, that *y* is to be pronounced as *w* for the more easily distinguishing it from *i*, as *syd*=602, pronounce *swid*, *typ*=307, pronounce *twip*.

The reader will observe, that the same date or number may be signified by different words, according as vowels or consonants are made choice of, to represent the figures, or to begin the words with, as,

325 *tel*, or *idu*, 154 *buf*, or *blo*, or *alf*, or *alo*, 93,451 *ni-ola*, or *out-fub*, or *ni-fla*, or *out-olb*, &c.

This variety gives great room for choice, in the formation of words, of such terminations as by their *uncommonness* are most likely to be remembered, or by any *accidental relation* or *allusion* they may have to the thing sought. Thus the year of the world in which Æneas is supposed to have settled in Italy in 2824; but as this may be expressed either by *ekef* or *deido*, I choose rather to join *deido* to Æneas, and make the technical word *Ænedeido* than *Ænekef*, for a reason which I think is obvious. Thus King John began his reign A. D. 199, (one thousand being understood to be added, as I shall shew hereafter;) but as this may be expressed by *anou*, or *boun*, or *ann*, I make choice of the last, for then it is but calling him *Jann* instead of John, and you have the time almost in his name. Thus Inachus King of Argos began his reign in the year before Christ 1856; with a very small variation in the spell-

ing, it is his name *Inakus*. More instances of this kind see in page vi. of the Introduction.

To go on with our art: it is further to be observed, that *z* and *y* being made use of to represent the cypher, where many cyphers meet together, as in 1000, 1000000, &c. instead of a repetition of *azyzyzy*, which could neither be easily pronounced nor remembered, *g* stands for hundred, *th* for thousand, and *m* for million. Thus *ag* will be 100, *ig* 300, *oug* 900, &c. *ath* 1000, *oth* 4000, *otho* or *othf* 4004, *peg* 7200, *dig* 2300, *lath* 51000, *am* 1000000, *azmoth* 10.004,000 *sumus* 65.000,056, *loun* 59.000,000, &c. The solid content of the earth (*TERRÆ MAGNITUDO*) is two hundred sixty-four thousand, eight hundred fifty-six millions of cubic miles; this is expressed by the word *Ter-magnit-éso-klaum*; *Termagnit* standing for *Terræ Magnitudo*; *éso-klaum* for 264,856.000,000, the number of cubic miles.

It will be sometimes also of use to be able to set down a fraction, which may be done in the following manner: let *r* be the separatrix between the numerator and the denominator, the first coming *before*, the other *after* it; as *iro* $\frac{3}{4}$: *urp* $\frac{4}{7}$: *pourag* $\frac{79}{100}$ or ,79: *north* $\frac{94}{1000}$ or ,094 &c. Where the numerator is 1, or unit, it need not be expressed, but begin the fraction with *r*, as $\frac{1}{2}$ *re*, $\frac{1}{3}$ *ri*, $\frac{1}{4}$ *ro*, &c. So in decimals, ,01 or $\frac{1}{100}$, *rag*, ,001 or $\frac{1}{1000}$, *rath*.

Thus I have given the reader a general view of the principal part of this method, and now proceed to shew how I have applied it to history, geography, astronomy, and other parts of useful learning; and, having explained a line or two in each, leave the rest to his own industry and sagacity; and though the geographical parts are not, in this edition, completely modernized, according to the present divisions of the earth, neither are the recent discoveries in astronomy noticed here; yet it is hoped that sufficient is done to answer the student's purpose.

SECTION II.

The Application of this Art to Chronology and History.

THE ages of the world before our Saviour's time are by chronologers generally divided into six: the first, from the creation to the deluge; the second, from the deluge to the call of Abraham, &c. according to the following periods:

| | Bef. Christ |
|---|-------------|
| 1. The CREATION of the world | 4004 |
| 2. The universal DELUGE | 2348 |
| 3. The call of ABRAHAM | 1921 |
| 4. Exodus, or the departure of the Israelites from Egypt | } 1491 |
| 5. The foundation of Solomon's TEMPLE | |
| 6. CYRUS, or the end of the captivity | 536 |
| The birth of Christ. | |

All this is expressed in one line belonging to TAB. I. as follows:

Crothf, Déletok, Abaneb, Exáfna, Témbýbe, Cyruts.

Cr denotes the Creation, *othf* 4004, Del the Deluge, Ab the calling of Abraham, Ex Exodus, Tem the Temple, and Cyr Cyrus. The technical endings of each represent the respective year according to the rules already laid down.

I shall explain two lines more.

Nicsilcon-áritel, Codathé-mateib, Ephcethe-nésfib.

Chállemar-eudíola, Covijúst-Olut, C-ágcopo-monseiz.

These two lines are a short history of the first six General Councils; and every syllable has its distinct signification. The *first* represents the place where it was held: the *second* shews who was pope at that time; the *third* under what emperor; the *fourth* against what heretic; the *fifth*, in what year of our Lord. Thus the first word is *Nicsilcon-áritel*:

Nic denotes the Council of Nice, sil Pope SILvester, con the Emperor Constantine, ari the heretic ARIUS, tel the year 325. The second word is Codathé-mateib; Co denotes the Council of Constantinople, da Pope Damasus, the the Emperor THEodosius, ma the Macedonians, teib 381. The third is Ephcethe-nésfib; Eph the Council of EPHEsus, ce Pope Celestine, the the Emperor THEodosius, junior, nes the Nestorians, fib the year 431. The fourth is Chállemar-eudíola; Chal the Council of CHALcedon, le Pope LEO, mar the Emperor MARcian, eudi the errors of Eutyches and Dioscorus, ola the year 451. The fifth is Covijúst-Olut; Co stands for Constantinople, vi Pope Vigilius, just the Emperor Justinian, O the errors of Origen, lut the year 553. The sixth is C-ágcopo-monseiz; C stands again for Constantinople, ag for Pope Agatho, copo the Emperor Constantine Pogonatus, mon the Monothelites, seiz the year 680.

By this specimen the reader will be able to judge what he is to expect from the following Essay, and what it will cost him to make himself master of it. I would by no means have him discouraged at the difficulty which, at first view, he may apprehend there is, in charging his memory with so many harsh and barbarous lines; for, though they may appear to be so to a person unacquainted with them, and, as such, difficult to be remembered, yet when frequent repetition has made them familiar, what can be more easy than to supply the remaining part of a word, which you are prompted with the beginning of? as, for instance, to complete Cr—Del— Ab— Ex— Tem→ Cyr— with their technical endings, and make them up into the following lines, already explained,

Crothf, Déletok, Abaneb, Exáfna, Ténbybe, Cyruts.

I have only further to desire the reader to take notice, that for his greater ease, that part of the memorial words, which represents the numbers or

dates, is distinguished by *Italic* characters; that part which is *Roman* answers to the small capitals in the tables.

TABLE I.

*General Epochas and Æras, Ecclesiastical
and Civil.*

| | Bef. Christ |
|--|-------------|
| The Creation of the world [Crothf] | 4004 |
| The universal DELUGE [Déletok] | 2348 |
| The call of ABRAHAM [Abaneb] | 1921 |
| Exodus of the Israelites [Exáfna] | 1491 |
| The foundation of Solomon's TEMPLE [Témbybe] | 1012 |
| CYRUS, or the end of the captivity [Cyruts] | 536 |
| The birth of Christ. | |
| The destruction of TROY [Tróyabeit] | 1183 |
| The first OLYMPIAD [Olympois] | 776 |
| The building of Rome [Romput] | 753 |
| ÆRA of NABONASSAR [Ærnabonáspop] | 747 |
| The PHILIPPIC æra, or the death of Alexander [Phílido] | } 324 |
| The æra of CONTRACTS, or of the Seleucidæ, called in the book of Maccabees the æra of the kingdom of the Greeks [Contractad] | |
| A. D. | |
| The DIOCLESIAN æra, or the æra of Martyrs [Diocleseko] | } 284 |
| The æra of the Hegira, or flight of MAHOMET [Máhomaudd] | |
| The æra of YEZDEGIRD, or the Persian æra [Yezsid] | } 632 |

The Memorial Lines.

Crothf, Déletok, Abaneb, Exáfna, Témbybe, Cyruts.
Tróyabeit, Olympois, Romput & Ærnabonáspop.
Phílido, Contractad + Diocléseko, Máhomaudd, Yezsid.

THOUGH I have no where (except in the ages of the patriarchs before Abraham) made use of any other æra than that of the years before and after Christ, because those being known, it is easy to find the correspondent year of any other æra, according to the common rules laid down in books of chronology, which I shall suppose the reader to be acquainted with ; yet, in the more eminent epochas, that he may be able, at first glance, to have a notion of the time of any thing or person which he may meet with in authors making use of the Julian period and the æra of the creation of the world, I have also added them in the following table.

TABLE II.

| | Jul. Period. | An. M. |
|------------------------------------|--------------|--------|
| The CREATION of the world | 710 | 1 |
| The universal DELUGE | 2366 | 1656 |
| The call of ABRAHAM | 2793 | 2083 |
| EXODUS of the Israelites | 3223 | 2513 |
| The foundation of Solomon's TEMPLE | 3702 | 2992 |
| CYRUS, or the end of the captivity | 4178 | 3468 |
| The destruction of TROY | 3531 | 2821 |
| The first OLYMPIAD | 3938 | 3228 |
| The building of ROME | 3961 | 3251 |
| The birth of CHRIST | 4714 | 4004 |

The Memorial Lines.

Créppaz, Delpétsau, Démasus, Abmezki, Abpépni.
 Expidet, Exmélat, Tempipze, Temménue, Cymúntosk.
 Cyrpoboik, Troypílta, Trómekeb, Olympinik, Olmtéek.
 Rompinsa, Rómidub, Chrismúndothf, Chrisperifoibo.

EXPLANATION.

The first syllable points out the epocha as before ; the addition of *p* or *peri* denotes that it is the year of the Julian period ; the addition of *m* or *mund*, that it is the year of the world.

TABLE III.

Chronological and Historical Miscellanies before Christ.

| | Bef. Christ |
|--|--------------------------------|
| Building of the tower of Babel [Bábedit] | 2233 |
| Mizraim settles in Egypt [Misdakk] | 2188 |
| Destruction of Sodom and Gomorrah [Sódakoup] | 1897 |
| Death of JOSEPH [Joséphasil] | 1635 |
| Annus Sabbaticus, or the first Sabbatical year [AnSafff] | 1444 |
| SAUL first king of Israel [Sauláznu] | 1095 |
| JEROBOAM, or the defection of the ten tribes [Jéronoil] | 975 |
| SALMANESER King of Assyria takes Samaria, and extinguishes the kingdom of Israel, [Salmpeb] | 721 |
| HOLOFERNES invadeth Judæa, and is slain by Judith [Holofésu] | 655 |
| NINEVEH destroyed by the Medes and Babylo- nians [Ninévsad] | 612 |
| JEHOIAKIM taken prisoner by Nebuchadnezzar, from whence began the 70 years captivity of the Jews [Jehóiasys] | 606 |
| ZEDEKIAH sent in chains to Babylon, and Je- rusalem utterly destroyed by Nebuzaradan, captain of the guard to Nebuchadnezzar; the end of the kingdom of Judah [Zedleik] | 588 |
| [N.B. The kingdom of Israel [Isrelo] The kingdom of Judah [Judosk] | lasted { 254 years.] 468 |
| The BABYLONIANS having revolted from DARIUS Hystaspes, are besieged by him, and Baby- lon taken, after a siege of 20 months, by the stratagem of Zopyrus [Babdárhylas] | 516 |
| SARDIS burnt by the Athenians, in confede- racy with the Ionians, which gave the first rise to the Persian war against the Greeks [Sardug] | 500 |

| | | |
|--|------------------|-----|
| ZOROASTRES appears at the Persian court [Zoroafne] | Bef. Christ } | 492 |
| ESTHER made concubine to Ahasuerus [Esthosa] | | 461 |
| The feast of PURIM instituted in memory of the defeat of Haman's plot for the destruc- tion of the Jews [Purolt] | } | 453 |
| EZRA sent to be governor of Judæa [Ezrolk] | | 458 |
| NEHEMIAH sent governor to Judæa, rebuilds the walls of Jerusalem [Nehemiffu] | } | 445 |
| The temple on Mount GERIZIM began to be built by Manasseh [Gerizózei] | } | 408 |
| The translation of the SEPTUAGINT [Septepoi] | | 277 |
| JUDAS MACCABÆUS [Jumass] | | 166 |

The Memorial Lines.

Bábedit & Mizdakk, Sódakoup, Joséphasil, AnSafff.
 Sauláznu, Jéronoil, Salmpeb, Holoféslu, Ninévsad.
 Jehoíasys, Zedleik, [duravit Isrelo, Judosk.]
 Babdárhylas, Sardug, Zoroafne, Esthosa, Purolt.
 Ezrolk, Nehemiffu, Gerizózei, Septepoi, Jumass.

TABLE IV.

*Chronological and Historical Miscellanies after
Christ.*

| | | |
|--|-------------------|-----|
| DISPERSIO JUDÆORUM, or the destruction of Jerusalem by Titus [Dis-judpa] | After Christ } | 71 |
| LUCIUS of Britain, the first Christian king [Lúcibup] | } | 157 |
| ZENOBIÀ Queen of Palmyra led in triumph to Rome by Aurelian [Zenobdoid] | } | 272 |
| ECCLESIAE PAX, or the establishment of Chris- tianity by Constantine [Ecclesi-pax/ad] | } | 312 |
| St. ALBAN the British Protomartyr [Albantyt] | | 303 |
| CLOVIS the first Christian king of France [Clóvoka] | } | 481 |
| LINGUA LATINA, or the Latin tongue ceases to be commonly spoken in Italy [Ling-latleip] | } | 587 |

After Christ

| | |
|--|--------|
| AUGUSTINE the monk, sent by Gregory the Great from Rome, converts ETHELbert King of Kent [Aug-ethelúnu] | } 596 |
| CHARLEMAGNE declared Emperor of the West [Charlmeig] | } 800 |
| THE CROISADE, or Holy War [Croisánu] | 1095 |
| HYBERNIA, or the conquest of Ireland [Hybaboid] | } 1172 |
| OTTOMAN the founder of the present Turkish empire [Ottadoup] | } 1297 |
| THE mariner's COMPASS found out [Compatze] | 1302 |
| THE PAPAL seat removed to Avignon [Pap-avatyl] | 1305 |
| WALTER LOLLARD with many of his followers burnt in Austria, for opposing the Romish superstitions [Lolatub] | } 1351 |
| GUNPOWDER invented in Germany by a monk [Gunpátfo] | } 1344 |
| TAMERLANE the Tartar overcomes BAJAZET the Turk, and puts him in an iron cage. (The Great Mogul is descended from him.) [Tambajatóun Mog.] | } 1399 |
| SCANDERBERG Prince of Epirus famous for his victories over the Turks [Scanderboft] | } 1443 |
| THE invention of PRINTING [Prinafon] | 1449 |
| CONSTANTINOPLE taken by the Turks, and an end put to that empire [Constantinobóli] | } 1453 |
| CHRISTOPHER COLUMBUS, a native of Genoa, discovers Cuba and Hispaniola [Columbont] | } 1493 |
| N. B. The southern continent of America was discovered about four years after by Americus Vesputius, from whom it took its name. | |

The Memorial Lines.

Dis-judpa, Lúci-bup, Zenobdoid, Ecclesi-paxtad.
 Albantyt, Clóvoka, Ling-latléip, Aug-ethelúnu.
 Charlmeig, Croisánu, Hybaboid, Ottadoup, Compatze.
 Pap-avatyl, Lolatub, Gunpátfo, Tambajatóun [Mog.]
 Scanderboft, Prinafon, Constantinobóli, Columbont.

TABLE V.

The Regal Table of England since the Conquest, and some of the most remarkable Princes before it.

| | | |
|--|-------------|------|
| CASIBELAUNUS chosen chief commander by the Britons against the invasion of Julius Cæsar [Casibelud] | Bef. Christ | |
| Queen BOADICEA, the British heroine, being abused by the Romans, raises an army and kills 7000 [Bôadaup] | Aft. Christ | 52 |
| VORTIGERN invited the Saxons to the assistance of the Britons against the Scots and Picts [Vortigfos] | | 67 |
| HENGIST, the Saxon, erected the kingdom of Kent, the first of the heptarchy [Hengful] | | 446 |
| King ARTHUR famous for his powerful resistance and victories over the Saxons [Arthlaf] | | 455 |
| EGBERT, who reduced the heptarchy, and was first crowned sole monarch of England [Egbekek] | | 514 |
| ALFRED, who founded the University of Oxford [Alfrékpe] | | 828 |
| CANUTE the Dane [Canbau] | | 872 |
| Edward the CONFESSOR [Confésfe] | | 1016 |
| | | 1042 |
| WILLIAM the CONQ. [Wil-consau] | Oct. 14. | 1066 |
| WILLIAM RUFUS [Rufkoi] | Sept. 9. | 1087 |
| HENRY I. [Henrag] | Aug. 2. | 1100 |
| STEPHEN [Stephbil] | Dec. 2. | 1135 |
| HENRY the SECOND [Hensécbuf] | Oct. 25. | 1154 |
| Richard I. [Ricbein] | July 6. | 1189 |
| John [Jann] | April 6. | 1199 |
| HENRY the THIRD [Hethdas] | Oct. 19. | 1216 |
| EDWARD I. [Eddoid] | Nov. 16. | 1272 |
| EDVARDUS SECUNDUS [Edsetyp] | July 7. | 1307 |
| EDVARDUS TERTIUS [Edtertes] | Jan. 25. | 1326 |

| | |
|---------------------------------|----------------|
| RICHARDUS SECUNDUS [Risetóip] | June 21. 1377 |
| HENRY the fourth [Hefotoun] | Sept. 20. 1399 |
| HENRY the fifth [Hefifád] | Mar. 20. 1412 |
| HENRY the sixth [Hénsifed] | Aug. 31. 1422 |
| EDVARDUS QUARTUS [Edquarfauz] | Mar. 4. 1460 |
| Edward the fifth } [Efi-Rokt] { | April 9. 1483 |
| Richard III. } | June 22. 1483 |
| HENRICUS SEPTIMUS [Hensépfeil] | Aug. 22. 1485 |
| HENRICUS OCTAVUS [Henoclyn] | April 22. 1509 |
| EDVARDUS SEXTUS [Edsexlos] | Jan. 28. 1546 |
| MARY [Marylut] | July 6. 1553 |
| ELISABETH [Elsluk] | Nov. 17. 1558 |
| JAMES I. [Jamsyd] | Mar. 24. 1602 |
| CAROLUS PRIMUS [Caroprimsel] | Mar. 27. 1625 |
| CAROLUS SECUNDUS [Carsecsök] | Jan. 30. 1648 |
| JAMES II. [Jamseif] | Feb. 6. 1684 |
| WILLIAM and MARY [Wilseik] | Feb. 13. 1688 |
| ANNE [Anpyb] | Mar. 8. 1701 |
| GEORGE I. [Gëobo] | Aug. 1. 1714 |
| GEORGE II. [Gëosecdoi] | June 11. 1727 |
| GEORGE III. [Gëothpauz] | Oct. 25. 1760 |
| GEORGE IV. [Gëoquarkez] | Jan. 29. 1820 |

The Memorial Lines.

Casibelud, Bóadaup, Vortigfos, Hengful & Arthlaf.
Egbekek, Alfrékpe, Canbau, Confesfe.

Wil-consau, Rufkoi, Henrag. ———
Stephbil & Hensécbuf, Ricbein, Jann, Hethdas & Eddoid.
Edsetyp, Edtertes, Risetóip, Hefotoun, Hefifáque.
Hénsifed, Edquarfauz, Efi-Rokt, Hensépfeil, Henoclyn.
Edsexlos, Marylut, Elsluk, Jamsyd, Caroprimsel.
Carsecsök, Jamseif, Wilseik, Anpyb, Gëobo—doi—pauz—
kez.

N. B. After Canute inclusive, one thousand is to be added to each. It was thought unnecessary to express it, it being a thing in which it is impossible that any one should mistake.

If it be desired to remember in what month, and day of the month, each king began his reign, it may be done by the following lines:

Wil-tbó-sou-fat, Steph-de, Jam-chef-fau, Ri-ls-jeb-ed,
 El-nap.
 Hen-gé-tel-an-sez-chez-gib-ged-ped, Geor-ga-jab, An-
 chei.
 Car-chep-riz, Ma-ls, Jo-ps, Ed-nás-loi-rél-cho-pou-
 rekque.

EXPLANATION.

The *italic* letters represent the day of the month; the letter immediately preceding represents the month itself, r standing for January, f for February, ch for March, p for April, m for May, j for June, l for July, g for August, s for September, t for October, n for November, and d for December.

Thus Steph-de, Steph King Stephen, de, Dec. 2. El-nap, El Elizabeth, nap Nov. 17. In words of three or more syllables, the first syllable stands for all the kings of the same name, and the following syllables in order to answer to the first, second, third, &c. of that name. So Jam-chef-fau; Jam denotes James I. & II. chef (viz. March 24.) belongs to James I. and fau (viz. Feb. 6.) to James II. So Ri-ls-jeb-ed; Ri denotes all the Richard, ls (viz. July 6.) belongs to Richard I. jeb (viz. June 21.) to Richard II. and ed (viz. 22. of the same month) to Richard III.

If this be thought either too difficult or too minute, the reader may pass it over.

TABLE VI.

Chronological Miscellanies since the Conquest.

| | | |
|---|---|--------------|
| | | After Christ |
| Jerusalem regained from the Turks and God- | } | 1099 |
| frey of BULLOIGNE made king of it [God- | | |
| bulnou] | | |
| The INQUISITION first erected against the Al- | } | 1222 |
| bigenses [Inquised] | | |
| The confirmation of Magna CHARTA by King | } | 1225 |
| Henry III. [Charteel] | | |

| | |
|--|------|
| Wat TYLER's rebellion suppressed [Tyltka] | 1381 |
| Jack CADE's rebellion suppressed [Cadefty] | 1450 |
| MARTIN LUTHER begins to preach in Germany against indulgences, and other errors of the Church of Rome [Mar-luthlap] | 1517 |
| The name of Protestants first began on oc- casion of the protestation the Lutherans made against the decree of the Chamber of Spire against them [Protalen] | 1529 |
| The SMALCALDAN league, or agreement made between the Protestants of Germany for their mutual defence at Smalcald [Smalcalloz] | 1540 |
| The Council of TRENT began Dec. 13. [Tren-decat-alfu] | 1545 |
| The MASSACRE of Protestants at PARIS [Mas- paraloid] | 1572 |
| The UNITED provinces under the protection of William, Prince of Orange, throw off the Spanish yoke [Un-ploin] | 1579 |
| The Spanish INVASION [Sp-invukk] | 1588 |
| The GUNPOWDER treason [Powdsyl] | 1605 |
| The famous rebellion at Naples, on occasion of the grievous excises, headed by MASA- NIELLO [Masanielsop] | 1647 |
| OLIVER CROMWELL usurps the government of England under the name of Protector [Cromsli] | 1653 |
| The island of JAMAICA in America taken by the English [Jamaicaull] | 1655 |
| CROMWELLI MORS [Crom-morsuk] | 1658 |
| GIBRALTAR taken (capta) by the English [Gib- rapzo] | 1704 |

The Memorial Lines.

God-bulnou, Inquisded, Charteel, Tyltka, Cadefty.
Mar-luthlap, Protalen, Smalcalloz, Tren-decat-alfu.
Mas-paraloid, Un-ploin, Sp-invukk, Powdsyl, Masa-
nielsop.

Cromsli, Jamaicaull, Crom-morsuk, capta Gibrapzo.

N. B. A thousand is to be added as above, where
it is not expressed.

TABLE VII.

The Patriarchs before and after the Flood.

| | Anno Mund. | Age. |
|------------------------------|------------|------|
| Adam [Adniz] | 1 | 930 |
| SETH [Setháty-nad] | 130 | 912 |
| ENOS [Endil-nyl] | 235 | 905 |
| CAINAN [Caitel-naz] | 325 | 910 |
| MAHALALEEL [Mahalatoul-koul] | 395 | 895 |
| JARED [Jarósy-naud] | 460 | 962 |
| ENOCK [Enchséd-isu] | 622 | 365 |
| METHUSELAH [Methuseíp-naun] | 687 | 969 |
| LAMECH [Lakoíf-poip] | 874 | 777 |
| NOAH [Noachazús-nuz] | 1056 | 950 |
| SHEM [Shembulk-aug] | 1558 | 600 |
| ARPHAXAD [Arasleí-fík] | 1658 | 438 |
| SALAH [Salasout-ott] | 1693 | 433 |
| HEBER [Hebaped-óso] | 1722 | 464 |
| PELEG [Pelapúp-etou] | 1757 | 239 |
| REU [Reuapeíp-din] | 1787 | 239 |
| SERUG [Serakán-diz] | 1819 | 230 |
| NAHOR [Nahorakón-bok] | 1849 | 148 |
| TERAH [Terakoík-dyl] | 1878 | 205 |
| ABRAHAM [Abezyk-boil] | 2008 | 175 |
| ISAAC [Isebyk-beíz] | 2108 | 180 |
| JACOB [Jáacobebaúk-bop] | 2168 | 147 |

The Memorial Lines.

Adniz, Setháty-nad ———

———— Endil-nyl, Caitel-naz, Mahalatoul-koul.

Jarósy-naud ———

Enchséd-isu, Methuseíp-naun, Lakoíf-poip, Noach-
azús-nuz.

Shembulk-aug, Arasleí-fík, Salasout-ott, Hebaped-óso.

Pelapúp-etou, Reuapeíp-din, Serakán-diz, Nahor-
akón-bok.

Terakoík-dyl, Abezyk-boil, Isebyk-beíz, Jáacobebaúk-bop.

TABLE VIII.

The Patriarchs, &c. according to their Years before Christ.

| | Bef. Christ |
|----------------------------|-------------|
| SETH [Séthikoif] | Born 3874 |
| ENOS s. [Enosipaun] | 3769 |
| CAINAN s. [Caitspou] | 3679 |
| MAHALALEEL s. [Mahalatsyn] | 3609 |
| JARED s. [Jarilof] | 3544 |
| ENOCH s. [Enchtike] | 3382 |
| METHUSELAH s. [Methusitap] | 3317 |
| LAMECH s. [Lamibiz] | 3130 |
| NOAH s. [Noenok] | 2948 |
| SHEM s. [Sheffs] | 2446 |
| ARPHAXAD s. [Arphetos] | 2346 |
| SALAH s. [Saldibb] | 2311 |
| HEBER s. [Hébdeka] | 2281 |
| PELEG s. [Pelégedop] | 2247 |
| REU s. [Réuédap] | 2217 |
| SERUG s. [Serúgdaku] | 2185 |
| NAHOR s. [Nahrdall] | 2155 |
| TERAH s. [Terebes] | 2126 |
| ABRAHAM s. [Abrámanous] | 1996 |
| ISAAC s. [Isakous] | 1896 |
| JACOB s. [Jakip] | 1837 |
| LEVI s. [Levapus] | 1756 |

The reader is desired to take notice, that in this and the following tables, (where it could be done consistently with the intended brevity,) the relation which every person bore to him who immediately goes before, is signified by a single letter; s standing for son or sister, b for brother, n for nephew or niece, u for uncle, g for grandson, m for mother. So the s after Enos shews that he was the son of Seth, and so on.

The Memorial Lines.

Séthikoif ———

Enosipaun, Caitspou, Mahalatsyn, Jarilof, Enchtíke.
 Methusitap, Lamibiz, Noenok, Sheffs, Arphetos, Saldibb.
 Hébdéka, Pelégedop, Reúedap, Serúgdaku, Nahrdall.
 Terebes, Abrámanous, Isakous, Jakip, Levapusque.

TABLE IX.

The Judges of Israel, from the Death of Moses to Samuel.

| | Bef. Christ |
|---------------------------------|-------------|
| Moses moritur (dies) [Mos-mola] | 1454 |
| JOSHUA [Jóshfol] | 1445 |
| OTHONIEL [Othózu] | 1405 |
| EHUD [Ehutel] | 1325 |
| DEBORAH [Debodeil] | 1285 |
| GIDEON [Gidol] | 1245 |
| ABIMELECH [Abmets] | 1236 |
| THOLA [Thlett] | 1233 |
| JAIR [Jaïdaz] | 1210 |
| JEPHTA [Jephtakk] | 1188 |
| IBZAN [Ibzdáke] | 1182 |
| ELON [Eloboil] | 1175 |
| ABDON [Abdonaso] | 1164 |
| ELI [Elíbup] | 1157 |
| SAMUEL [Sambap] | 1117 |

The Memorial Lines.

Mos-mola, Jóshfol, Othózu, Ehutel, Debodeil, Gidol,
 Abmets.

Thlett, Jaïdaz, Jephtakk, Ibzdáke, Eloboil & Elíbup.
 Abdonaso, Sambap ———

N. B. One thousand is to be added. The dates affixed to the Judges before Abimelech are supposed to relate, not to the beginning of their presiding over Israel, but to the end of the *rest* given by them.—
Vide the preface to *Petavii Rationarium*.

TABLE X.

Kings of all Israel.

| | |
|------------------------|---------------------|
| SAUL [Saulaznu] | Bef. Christ 1095 |
| DAVID [Davazul] | 1055 |
| SOLOMON s. [Solomázal] | 1015 |

The Defection of the Ten Tribes, 975.

Kings of Judah.

| | |
|------------------------------------|-----|
| REHoboam s. [Rehonoil] | 975 |
| Abijam s. [Abínup] | 957 |
| ASA s. [Asanul] | 955 |
| JEHOSAPHAT s. [--hosaphanbo] | 914 |
| JEHORAM s. [--horkein] | 889 |
| AHAZIAH s. [Ahazikku] | 885 |
| ATHALIAH m. [Athlikko] | 884 |
| JEHOAASH g. [--hoaashkoik] | 878 |
| AMAZIAH s. [Amazkin] | 839 |
| UZZIAH or AZARIAH s. [Uz-azarikby] | 810 |
| JOTHAM s. [Jothpuk] | 758 |
| AHAZ s. [Aházpod] | 742 |
| HEZEKIAH s. [Hezepep] | 727 |
| MANASSEH s. [Mansóut] | 693 |
| AMON s. [Amónsot] | 643 |
| JOSIAH s. [Josiasöz] | 640 |
| JEHOIAKIM s. [--hoiakimsyn] | 609 |
| JEHOIAKIN s. [--hoiakaug] | 600 |
| ZEDEKIAH u. [Zedekilnei] | 598 |

Kings of Israel.

| | |
|------------------------------------|-----|
| JEROBOAM son of Nebat [Je-robnoil] | 975 |
| N-adab s. [Nnuf] | 954 |
| BAASHA [Baanut] | 953 |

| | |
|---|-------------|
| | Bef. Christ |
| ELah s. [Elniz] | 930 |
| ZIMri, TIBni, and Omri [Zim- tibnen] | 929 |
| OMri alone [Omnel] | 925 |
| AHAB s. [Ahábnak] | 918 |
| AHAZiah [Ahazikoup] | 897 |
| JORam b. [Jorknau] | 896 |
| JEHU [Jehukko] | 884 |
| JEHOAHaz s. [Jehoahaklau] | 856 |
| JEHOASH s. [--hoashkin] | 839 |
| JEROboam II. s. [Jerosekdu] | 825 |
| ZACHARIAH s. [Zacharappt] | 773 |
| SHALLUM son of Jabesh [Shal- luppe] | 772 |
| MENAhem s. of Gadi [Menappe] | 772 |
| PEKAiah s. [Pekaipsa] | 761 |
| PEKAH [Pekapun] | 759 |
| HOSEA s. of Elah [Hospiz] | 730 |

The Memorial Lines.

Saulaznu, Davazul, Solomázal, Reho-jerobnoil.
 Abínup, Asanul, --hosaphanbo, --horkein, Ahazikku.
 Athlikko, --hoaashkoik, Amazkin, Uz-azarikby.
 Jothpuk & Aházpod, Hezepep, Mansóut & Amónsot.
 Josiasoz, --hoiakimsyn, --hoiakaug, Zedekilnei.
 Nnuf, Baanut, Elniz, Zim-tibnen, Omnel, Ahábnak.
 Ahazikoup, Jorknau, Jehukko, Jehoahaklau.
 --hoashkin, Jerosekdu, Zacharappt, Shalluppe, Menappe.
 Pekaipsa, Pekapun, Hospiz. ———

N. B. The break before some of the words denotes that Je is wanting, as --hosaphanbo for Jehosaphanbo, --horkein for Jehorkein, &c.

TABLE XI.

The Prophets.

| | |
|---|-------------|
| | Bef. Christ |
| JONas prophesied against Nineveh [Jonkze] | 802 |
| JOel prophesied [Joeig] | 800 |

| | |
|--|-------------|
| | Bef. Christ |
| Amos prophesied against King Jeroboam [Ampeip] | 787 |
| Hosea prophesies against Israel [Hosepku] | 785 |
| Isaiah began to prophesy [Ispauz] | 760 |
| NAHUM prophesies against Nineveh [Náhupuk] | 758 |
| Micah prophesies against Judah and Jerusalem } [Micput] | 753 |
| JEREMIAH began to prophesy [Jersta] | 631 |
| ZEPHANIAH prophesied [Zephautz] | 630 |
| HABAKUK prophesied [Habasyn] | 609 |
| EZEKIEL in captivity had his first vision [Ezeloul] | 595 |
| OBADIAH prophesies against the Edomites } [Obadilkoi] | 587 |
| Daniel had his vision of the four empires [Dull] | 555 |
| HAGGAI prophesied [Haglez] | 520 |
| ZECHARIAH prophesied [Zecharúdz] | 520 |
| MALACHI writes his book, which was the end } of vision and prophecy [Malachinp] | 397 |

The Memorial Lines.

Jonkze, Joeig, Ampeip, Hosepku, Ispauz, Náhupuk.
Micput, Jersta, Zephautz, Habasyn, Ezeloul, Obadilkoi.
Dull, Haglez, Zecharúdz, Malachinp ———

TABLE XII.

Kings of Assyria after the Dissolution of the ancient Assyrian Empire upon the Death of Sardanapalus.

| | |
|------------------------------------|-------------|
| | Bef. Christ |
| ARBACES [Arbapop] | 747 |
| SALMANESER s. [Salmpek] | 728 |
| SENNACHERIB s. [Sennachoibo] | 714 |
| ESARHADDON third s. [Esarhadopzau] | 706 |

Kings of Babylon.

| | |
|--------------------|-----|
| BELESIS [Belespop] | 747 |
| NADIUS [Nadpif] | 734 |

| | | Bef. Christ |
|---------------------------|-------------------|-------------|
| CHINZIRUS | } [Chi-Po-Jugpes] | } 726 |
| PORUS | | |
| JUGÆUS | | |
| MARDOK EMPADUS [Empea] | | 721 |
| ARKIANUS [Arkpyu] | | 709 |
| BELIBUS [Belibupze] | | 702 |
| APRONADIUS [Apronaunn] | | 699 |
| REGIBILUS [Regibsni] | | 693 |
| MESSESIMORDACUS [Messoud] | | 692 |

After his death followed an *inter-regnum* of eight years, of which Esarhaddon King of Assyria taking the advantage seized Babylon, and adding it to his former empire, thenceforth reigned over both for 13 years.

Kings of Assyria and Babylon jointly, the Royal Seat sometimes at Nineveh, and sometimes at Babylon.

| | | Bef. Christ |
|--|-------|-------------|
| ESARHADDON, called in Ptolemy's Canon ASSAR-ADDINUS [Assarsky] | } 680 | } |
| SAOSDUCHINUS s. [Saóssaup] | | |
| CHYNILADANUS [Chynsop] | | |
| | | 667 |
| | | 647 |

Chyniladanus having made himself despicable to his people, Nabopollasar, general of his army, set up for himself; and being a Babylonian by birth, made use of his interest there to seize that part of the Assyrian empire, and reigned king of Babylon 21 years. And in the 14th year of his reign, having made an affinity with Astyages, the eldest son of Cyaxares, by the marriage of his son Nebuchadnezzar with Amyitis the daughter of Astyages, entered into a confederacy with him against the Assyrians, and thereon joining their forces together, they besieged Nineveh; and after having taken the place, and slain Saracus the king, (who was either the successor of Chyniladanus, or he himself under another name,) to gratify the Medes, they utterly destroyed that great and ancient

city, and from that time Babylon became the sole metropolis of the Assyrian empire. *Vide Prideaux's Connection*, Part I. Book I.

Kings of Babylon.

| | Bef. Christ |
|--|-----------------|
| NABOPOLLASAR [Nabopol ^{sel}] | 625 |
| NEBUCHADNEZZAR s. [Nebsys] | 606 |
| EVILMERODOCH s. [Evillaub] | 561 |
| NERIGLISSAR b. in law [Neriglun] | 569 |
| ^a LABOROSOARCHOD s. | |
| NABONADIUS s. of Evilmerodoch | } Nabolul { 555 |
| DARIUS the MEDE, i. e. Cyaxares, uncle of Cyrus, to whom Cyrus allowed the title of all his conquests as long as he lived [Dar-medlik] | |
| | } 538 |

By his taking of Babylon ended the BABYLONISH empire, after it had continued 209 years [Reg-Babylezou]

The Memorial Lines.

Arbapop & Salmpek, Sennachoibo, Esarhadopzau.
 Belespop, Nadpif, Chi-Po-Jugpes, Empea, Arkpyn.
 Belibupze, Apronaunn, Regibsni, Messoud, Assarsky.
 Saóssaup, Chynsop, Nabopol^{sel}, Nebsys, Evillaub.
 Neriglun, Nabolul, Darmedlik, Reg-Babylezou.

TABLE XIII.

Kings of Egypt^b.

| | Bef. Christ |
|------------------------------------|-------------|
| SABACON the Ethiopian [Sabacopdoi] | 727 |
| SEVECHUS s. [Sevpan] | 719 |

^a For the reason why *Laborosoarchod* is not named in Ptolemy's Canon, see *Prideaux's Connection*, Part I. Book 2.

^b Of the ancient Kings of Egypt, from Mizraim or Menes, we have little else but the names, or fabulous accounts.

| | |
|---|-------------|
| | Bef. Christ |
| TIRHAKAH, last of the Ethiopians [Tirhapyt] | } 705 |
| Confederacy of the XII PRINCES [Prin-bé-sket] | |
| PSAMMITICHUS [Psammitspy] | 670 |
| NECUS s. [Necussas] | 616 |
| PSAMMIS s. [Psammaug] | 600 |
| APRIES s. [Aprunf] | 594 |
| AMASIS [Amaslaun] | 569 |
| PSAMMINITUS s. who was con- quered by Cambyses, son of Cyrus [Psamintlel] | } 525 |

*Kings of Media after the Revolt of the Medes from
Sennacherib.*

| | |
|--------------------------------------|-----|
| DEJOCES [Dejopzou] | 709 |
| PHRAORTES s. [Phraslau] | 656 |
| CYAXARES s. [Cyaxasif] | 634 |
| ASTYAGES s. [Astuno] | 594 |
| ^c CYAXARES II. [Cy-d-lun] | 559 |

Kings of Persia.

| | |
|---|-------|
| CYRUS [Cyruts] | 536 |
| CAMBYSES s. [Cambylen] | 529 |
| ^d [OROPASTES MAGUS] Oro-mag | } 521 |
| DARIUS, son of HYSTASPES [Dar- hystalda] | |
| XERXES s. by Atossa, daughter of Cyrus [Xerxoku] | } 485 |
| ARTAXERXES LONGIMANUS third s. [Longfauf] | |
| | } 464 |

^c Cyaxares succeeded Astyages in the civil government, and Cyrus, grandson of Astyages, by his daughter Mandane, in the military government.

^d Herodotus calls him *Smerdis*; Ctesias, *Spendadates*; Æschylus, *Mardus*; and in Scripture he is called *Artaxerxes*.

Bef. Christ

| | | |
|--|--------------|-------|
| XERXES II. s. slain by | } [Xerd-sog] | } 423 |
| Sogdianus base-born B. slain by | | |
| Ochus bastard B. commonly called | } DARIUS | } 404 |
| NOTHUS [Dar-nothodi] | | |
| Arsaces eldest s. commonly called Artaxerxes | } 404 | } |
| Mnemon [Mnoyf] | | |
| OCHUS s. [Ochilk] | | 358 |
| Arses youngest s. [Arstip] | | 337 |
| Darius CODOMANNUS, descended from Darius | } 335 | } |
| Nothus [Codomattu] | | |

*The Memorial Lines.**Egypt.*

Sabacopdoi, Sevpan, Tirhaphyl, Prin-bé-skei, Psammitspy,
Necussas, Psammaug, Aprunf, Amaslúun, Psaminitel.

Media.

Dejopzou, Phraslau, Cyaxasif, Astuno, Cy-d-lun.

Persia.

Cambylen, [Oro-mag, Dar-hystalda,] Xerxoku, Long-
fauf,
[Xerd-sog, Dar-nothodi,] Mnoyf, Ochilk, Arstip,
Codomattu.

TABLE XIV.

*The different Names of the same Persons in Scripture
and in profane Authors.*

| | | |
|-------------------------|---|---|
| ^e ARBACES | } | ^f Tiglath Pileser, 2 Kings xv. 29. |
| ^g BELESIS | | |
| NABONASSAR | } | BALADAN, Isa. xxxix. 1. |
| Mardok EMPADUS | | Merodach BALADAN, <i>ibid.</i> |
| ASSAR-Addinus | { | ESARHADDON, 2 Kings xix. 37. |
| | | ASNAPPER, Ezra iv. 10. |
| ^h NABONADIUS | | BELSHAZZAR, Daniel v. 1. and 29. |

^e Called also by Castor, *Ninus*, junior.

^f Also *Thilgamus* and *Thilgath Pilneser*.

^g Called also by Nicolas Damascenus, *Nanibrus*.

^h Called also by Berosus, *Nabonnedus*; by Megasthenes, *Nabonnidochus*; by Herodotus, *Labyrinthus*; and by Josephus, *Nabondolus*.

| | |
|-------------------------|---|
| CYAXARES | DARIUS the mede, <i>Daniel</i> iii. 31. |
| SABACON | SO, 2 <i>Kings</i> xvii. 4. |
| NECUS | Pharaoh NECHO, 2 <i>Chr.</i> xxxv. 20. |
| TARACHUS | PIRHAKAH, <i>Isa.</i> xxxvii. 9. |
| APRIES | Pharaoh HOPHRAH, <i>Jer.</i> xlv. 30. |
| DEJOCES | ARPHAXAD, <i>Judith</i> i. 1. |
| ⁱ ARTAXERXES | } AHASUERUS, <i>Esther</i> ii. 16. |
| LONGIMANUS | |
| SALMANESER | { ENEMESSAR, <i>Tobit</i> i. 2. |
| | { SHALMON, <i>Hosea</i> x. 14. |
| SENNACHERIB | SARGON, <i>Isaiah</i> xx. 1. |
| ASTYAGES | AHASUERUS, <i>Daniel</i> ix. 1. |
| SEVECHUS | SETHON, <i>Herodotus</i> 2. |
| SAOSDUCHINUS | * NABUCHODONOSOR, <i>Judith</i> i. 1. |
| CAMBYSES | AHASUERUS, <i>Ezra</i> iv. 6. |
| SMERDIS | ARTAXERXES, <i>Ezra</i> iv. 7. |

The Memorial Lines.

Arb-tig, Bel-bala-nab, Nabonad-belsh, Dar-m-cya,
 Sab-so,
 Dej-arphax, Apr-hoph, Empád-balad, Ass-esar-asnap,
 Sen-sarg, Salm-ene-shalm, Sev-seth, Saós-nabu, Smerd-
 art,
 Tirh-tara, Nech-necus, Art-long—Asty-ahas, Cam-
 ahasque.

TABLE XV.

Kings of Egypt and Syria, after the Death of Alexander the Great.

| <i>Kings of Egypt.</i> | <i>Bef. Christ</i> |
|--|--------------------|
| Ptolemæus LAGUS or Soter, [<i>Lagtyo</i>] | 304 |
| Ptol. Philadelphus s. [<i>Phadko</i> or <i>Phildeif</i>] | 284 |
| Ptol. Evergetes s. [<i>Eudos</i>] | 246 |
| Ptol. Philopator s. [<i>Ptol-pheeb</i>] | 221 |
| Ptol. EPIPHANES s. [<i>Ptol-epiphezo</i>] | 204 |

ⁱ Archbishop Usher thinks that Darius Hystaspes was the K. Ahasuerus that married Esther; Scaliger, that Xerxes was.

* Nabuchodonosor was a name among the Babylonians, commonly given to their kings, as that of Pharaoh was among the Egyptians.

| | |
|---|-----------------|
| Ptol. Philometor s. [Phombeiz] | Bef. Christ 180 |
| Ptol. Physcon B. [Physcobfu] | 145 |
| Ptol. LATHYRUS s. [Lathyradz] | 120 |
| ALEXANDER n. [Alexanky] | 80 |
| Ptol. AULETES bastard s. of Lathyrus [Aulaul] | 65 |
| CLEOPATRA D. [Cleopatla] | 51 |

Kings of Syria.

| | |
|--|-----|
| SELEUCUS Nicanor [Sél-nitad] | 312 |
| ANTIOCHUS Soter s. [Antí-sodoin] | 279 |
| ANTIOCHUS THEOS s. [A-thedauz] | 260 |
| SELEUCUS CALINICUS s. [Sel-caldfu] | 245 |
| SELEUCUS CERAUNUS s. [Cerauneel] | 225 |
| ANTIOCHUS MAGNUS B. [Ant-magdee] | 222 |
| SELEUCUS Philopator s. [Sel-phaks] | 186 |
| ANTIOCHUS E-piphanes B. [An-Eboil] | 175 |
| ANTIOCHUS EUPATOR s. [Ant-éupasó] | 164 |
| DEMETRIUS S-oter s. of Seleucus Philopator } [Dem-Sáse] | 162 |
| ALEXANDER BALA [Al-balbuz] | 150 |
| DEMETRIUS Nicator son of Demetrius Soter } [D-nicafu] | 145 |
| ANTIOCHUS SIDETES B. [Sidétboz] | 140 |
| DEMETRIUS Nicator [D-nicaty] | 130 |
| ZEBINA [Zebbel] | 125 |
| ANTIOCHUS GRYPUS son of Demetrius Nica- } tor [Grypadi] | 123 |
| SELEUCUS s. [Seleucous] | 96 |
| PHILIP B. [Philipne] | 92 |
| TIGRANES King of Armenia [Tigráneit] | 83 |

The Memorial Lines.

Egypt.

Lagtyo, Phadko, Eudos, Ptol-pheeb, Ptol-epiphezo,
Phombeiz,

Physcobfu, Lathyradz, Alexanky, Aulaul, Cleopatla.

Syria.

Sél-nitad, Antí-sodoin, A-thedauz, Sel-caldfu, Cerauneel,
Ant-magdee, Sel-phaks, An-Eboil, Ant-éupasó, Dem-
Sáse,

Al-balbuz, D-nicafu, Sidétboz, D-nicaty, Zebbel,
Grypadi, Seleucous, Philipne, Tigráneit,——

TABLE XVI.

Jewish High Priests, &c. after the Return from the Captivity.

| | Bef Christ |
|---|------------|
| JESHUA son of Jozadack [Jeshúalis] | 536 |
| JOIAKIM s.. [Joiakokt] | 483 |
| ELIASHIB s. [Elsholt] | 453 |
| JOIADAH s. [Joiadoat] | 413 |
| ¹ JOHANAN s. [Johanánipt] | 373 |
| JADdua [Jadutob] | 341 |
| ONIAS PRIMUS s. [On-prímida] | 321 |
| SIMON the just s. [Sim-jig] | 300 |
| ELEAZAR br. [Eleádna] | 291 |
| MANASSEH son of Jaddua, and uncle of } Simon the Just [Manásseps] | 276 |
| ^m ONIAS II. son of Simon the Just [On-sduz] | 250 |
| SIMON II. (SECUNDUS) s. [Sim-secdap] | 217 |
| ONIAS tertius s. [On-tboul] | 195 |
| JASON br. [Jasboil] | 175 |
| MENELAUS br. [Menelápe] | 172 |
| On the death of Menelaus, Alcimus was made high priest by Antiochus Eupator. After him, Jonathan, brother of Judas, was made high priest by Alexander Bala. | |
| JUDAS MACCABÆUS (s. of Mattathias, descended from Asmonæus) captain of the Jews [Ju-máccabass] | 166 |
| JONATHAN br. [Jónabauz] | 160 |
| SIMON MACCABÆUS [Si-macbot] | 143 |
| HYRCANUS s. [Hyrcatu] | 135 |
| K. ARISTOBULUS s. [K-Arbys] | 106 |
| ALEXANDER JANNÆUS br. [Jannazu] | 105 |
| ALEXANDRA w. [Alxándroik] | 78 |

¹ Called also Jonathan. *Nehemiah* x. 11.

^m He being an infant at his father's death, Eleazar was made high priest.

| | Bef. Christ |
|---|-------------|
| { ARISTOBULUS SECUNDUS younger s. K. [Aristób-secaun]) | 69 |
| { HYRCANUS SECUNDUS elder br. H. P. [Hyrca-secundsi] | 63 |
| { ANTIQONUS younger son of Aristobulus K. [Antigonoz] | 40 |
| HEROD son of Antipas K. [Herodík] | 38 |
| ARCHELAUS K. [Archelt] | 3 |

The Memorial Lines.

Jeshúalis, Joiakokt, Elsholt, Joiadoat, Johanánipt,
Jadutob, On-prímida, Sim-jig, Eleádna, Manásseps,
On-sduz, Sim-secdap, On-tboul, Jasboil, Menelápe,
Ju-máccabass, Jónabauz, Si-macbot, Hyrcatu, K-Arbys,
Jannazu, Alxándroik, Aristób-secaun, Hyrca-secundsi,
Antigonoz, Herodík, Archelt ———

TABLE XVII.

Founders, &c. of ancient Monarchies.

| | Bef. Christ |
|---|---------------|
| { NINUS founder of the Assyrian monarchy [Ninezlou] | 2059 |
| SEMIramis wife of Ninus [Semanaul] | 1965 |
| { SARDANapalus in whom ended the Assyrian monarchy [Sardanpop or paup] | 747 or 767 |
| ÆGIALEUS, King of Sicyon [Ægialézkou] | 2089 |
| INACHUS, first King of Argos [Inakus] | 1856 |
| { The OGYGian flood, under Ogyges King of Attica [Ogygapaus] | 1766 |
| { PROMETHEUS, son of Japetus, brother of Atlas [Praskoi] | 1687 |
| CECrops first King of Athens [Cecblus] | 1556 |
| SISYPHUS first King of Corinth [Sisypálzo] | 1504 |
| TEUCER first King of Troy [Teucbuzd] | 1502 |
| CADMUS first King of Thebes [Cadmáfno] | 1494 |
| { SATURN expelled Crete by his son Jupiter, settled in Italy [Satátty] | 1330 |

| | |
|--|-------------|
| | Bef. Christ |
| PERSEUS first King of Mycene [Pérsatat] | 1313 |
| HERCULES, son of Jupiter by Alcmena [Herbdoif] | 1274 |
| The ARGONAUTIC expedition [Argóbdaup] | 1267 |
| OEDIPUS King of Thebes [Oédibess] | 1266 |
| THESEUS son of Ægeus [Thesbdif] | 1234 |
| ⁿ CODRUS the last King of Athens [Codrázpa] | 1071 |
| CARANUS first King of Macedon [Carankaf] | 814 |
| CANDAULES King of Lydia [Candauptu] | 735 |
| CRÆSUS King of Lydia [Cræsúse] | 562 |
| CYRUS, founder of the Persian empire [Cyruts] | 536 |
| ALEXANDER, founder of the Grecian empire [Alexita] | } 331 |
| JULIUS CÆSAR, founder of the Roman empire [Julos] | |
| | 46 |

The Memorial Lines.

Ninezlou, Semanaul, Sardanpop, Ægialézkou,
Inakus, Ogygapaus, Praskoi, Cecblus, Sisypbólzo,
Teucbuzd, Cadmáfno, Satátty, Pérsatat, Herbdoif,
Argóbdaup, Oédibess, Thesbdif, Codrázpa, Carankaf,
Candauptu, Cræsúse, Cyruts, Alexita, Julos.

TABLE XVIII.

Grecian History.

| | |
|--------------------------------|-------------|
| | Bef. Christ |
| The THEBAN war [Thebadel] | 1225 |
| First MESSENIAN war [Messpot] | 743 |
| Second MESSENIAN war [Messku] | 685 |
| Battle of MARATHON [Marathónz] | 490 |

| | |
|---|--------|
| ⁿ After the death of Codrus the Athenians had perpetual Archons, the first of which was MEDON [Medazoiz] | } 1070 |
| Then decennial Archons, the first of which was CHAROPS [Charoppuo] | |
| Then annual Archons, the first of which was CREON [Creseiz] | } 680 |
| ————— Medazoiz, Charoppuo, Creseiz. | |

| | Bef. Christ |
|--|-------------|
| Battle of SALAMIS [Salamóky] | 480 |
| Battle of EURYMEDON [Eurymedopz] | 470 |
| The PELOPONNESIAN war [Pelofib] | 431 |
| Battle of LEUCTRA [Leucratpi] | 373 |
| Battle of MANTINEA [Mantisi] | 363 |
| PHOCÆAN or sacred war [Phocilp] | 357 |
| Battle of the River GRANICUS [Granitif] | 334 |
| Battle at the ISSUS [Isstit] | 333 |
| Battle of ARBELA [Arbtib] | 331 |
| ALEXANDER the Great succeeds Philip [Alextis] | } 336 |
| Philip ARIDÆUS [Aritet] | |
| Alexander ÆGUS [Ægtas] | 316 |

The Memorial Lines.

Thebadel & Messpot, Messku, Marathónz, Salamóky,
Eurymedopz, Pelofib, Leucratpi, Mantisi, Phocilp,
Granitif, Isstit, Arbtib, Alextis, Aritet, Ægtas.

N. B. After the death of Alexander there arose great confusion among his Generals about the succession, each seizing what he could for himself, till by leaguings and making war against each other, they were, after some years, all destroyed except four. These were Cassander, Lysimachus, Ptolemy, and Seleucus, who divided the whole empire.

CASSANDER had MACEDON and GREECE.

LYSIMACHUS had THRACE and those parts of Asia situated upon the Hellespont and the Bosphorus.

PtoLEMY had Æ-gypt, LIBYA, A-rabia, PALESTINE, and Cœlo-SYRIA.

SELEUCUS all the rest of Asia, &c.

The Memorial Line.

Cáss-magre, Lys-thrachebos, Ptol-ælibapalsy, Seleuc-as.

TABLE XIX.

Grecian Lawgivers, Philosophers, and Poets.

| | Bef. Christ |
|--|-------------|
| LYCURGUS born [Lycnes] | 926 |
| DRACO [Drásdo] | 624 |
| SOLON died [Solun] | 559 |
| PYTHAGORAS died aged 80. [Pytháglys] | 506 |
| EUCLID the geomet. flourished [Euclozau] | 406 |
| SOCRATES died [Socrinn] | 399 |
| XENOPHON died [Xenóphilou] | 359 |
| PLATO died [Platok] | 348 |
| DIODEGENES died aged 90. [Diotet] | 323 |
| ARISTOTLE died aged 63. [Aristéd] | 322 |
| EPICURUS died aged 72. [Epicudpa] | 271 |
| ARCHIMEDES slain [Archidad] | 212 |
| LINUS and Orpheus [Linadka] | 1281 |
| HOMER died [Homnad] | 912 |
| ARCHILOCHUS [Archilochuskau] | 686 |
| SAPPHO [Sapphsyd] | 602 |
| ANACREON [Anácloud] | 592 |
| ÆSCHYLUS born [Æschlel] | 525 |
| PINDAR died aged 80. [Pindfóz] | 440 |
| SOPHOCLES born [Sophoclozoi] | 407 |
| THEOCRITUS flourished [Theócreku] | 285 |
| LYCOPHRON flourished [Lycophrepz] | 270 |

The Memorial Lines.

Lycnes, Drásdo, Solun, Pytháglys, Euclozau, Socrinn,
 Xenóphilou, Platok, Diotet, Aristéd, Epicudpa,
 Archidad, Linadka, Homnad & Archilochuskau,
 Sapphsyd & Anácloud, Æschlel, Pindfóz, Sophoclozoi,
 Theócreku, Lycophrepz. ———

TABLE XX.

Roman History.

The foundation of Rome was laid in the 3961
 year of the Julian period [Rompinsa] anno mundi

3251 [Rómidub] in the year before Christ 753, or as some 752, [Romput] upon the 22d day of APRIL [Apride] in the fourth year of the sixth Olympiad [fols]

The REGAL STATE under VII. kings lasted
245 years [Stat-regdol]

Bef. Christ

| | |
|--------------------------------|-----|
| ROMULUS [Romput] | 753 |
| NUMA POMPILIUS [Numpaf] | 714 |
| TULLUS HOSTILIUS [Hostilspy] | 670 |
| ANCUS MARTIUS [Ancsip] | 637 |
| TARQUINIUS PRISCUS [Priscsaf] | 614 |
| SERVIUS TULLIUS [Servups] | 576 |
| TARQUINIUS SUPERBUS [Superlid] | 532 |

The Memorial lines.

————Stat-regdol,

Rompinsa, Rómidub, Romput, fols Apride, Numpaf, Hostilspy, Ancsip, Priscsaf, Servupsque Superlid.

TABLE XXI.

The CONSULAR STATE, from Brutus and Collatinus the first consuls, to the period when Julius Cæsar was made perpetual dictator, lasted 464 years [Stat-consularoso]

Bef. Christ

| | |
|---|-----|
| CONSULS first made [Consulzoi] | 507 |
| FIRST Dictator [Diconoi] | 497 |
| Creation of the TRIBUNES [Tribfoud] | 492 |
| Creation of the DECEMVIRI [Decemvoly] | 450 |
| Creation of the MILITARY T-ribunes [Mil-tfoz] | 440 |
| INCENDIUM Urbis, or the burning of the city by the Gauls [Incendikk] | 388 |
| War with the SAMNITES [Samnífe] | 342 |
| War with PYRRHUS King of Epirus [Pyrdoin] | 279 |
| FIRST PUNIC war | 263 |
| Second PUNIC war | 216 |
| Third PUNIC war | 148 |

| | Bef. Christ |
|---|-------------|
| The end of the sedition of the GRACCHI [Gracchade] | 122 |
| The JUGURTHINE war [Jugubzou] | 109 |
| War with the CIMBRI [Cimbat] | 113 |
| The social or ITALIAN war [Italein] | 89 |
| War begun with MITHRIDATES [Mithridatkou] | 89 |
| DICTATORSHIP of SYLLA [Syl-dicteiz] | 80 |
| CATALINE's conspiracy [Catalaud] | 62 |
| FIRST TRIUMVIRATE [Trun] | 59 |
| BATTLE of PHARSALIA [Pharsop] | 47 |
| BATTLE of PHILIPPI [Bat-philob] | 41 |
| BATTLE of ACTIUM [Acta] | 31 |

The Memorial Lines.

————— Stat-consularoso,
 Consulzoi, Diconoi, Tribfoud, Decemvolz, Mil-tfoz,
 Incendikk, Samnife, Pyrdoin, Bel-punesi-das-bok,
 Gracchade, Jugubzou, Cimbat, Italein, Mithridatkou,
 Syl-dicteiz, Catalaud, Trun, Pharsop, Bat-philob, Acta.

TABLE XXII.

The Twelve Cæsars.

| | Bef. Christ |
|---|-------------|
| I. JULIUS CÆSAR [Julios] | 46 |
| II. AUGUSTUS, great nephew [Augustel] | 25 |
| III. TIBERIUS, step-son [Tiberbu] | 15 |
| IV. CALIGULA, great nephew [Caligulik] | 38 |
| V. CLAUDIUS, uncle [Claod] | 42 |
| VI. NERO, step-son [Nerul] | 55 |
| VII. GALBA } VIII. OTHO } [Galb-othosou] | 69 |
| IX. VITELLIUS } X. VESPASIAN } [Vit-vespoiz] | 70 |
| XI. TITUS, son [Titpou] | 79 |
| XII. DOMITIAN, brother [Domitka] | 81 |

The Memorial Lines.

Julios, Augustel + Tiberbu, Caligulik, Claod,
 Nerul, Galb-othosou, Vit-vespoiz, Titpou, Domitka.

N. B. The reign of Julius Cæsar is here supposed to commence from the death of Pompey, which made way for his absolute power soon after; the reign of Augustus from the full establishment of his authority by the senate and people. Some reckon it as commencing from the death of Anthony; and others, yet sooner, from the death of Julius Cæsar.

TABLE XXIII.

The Roman Emperors from Nerva to Jovian.

| | Anno Domini |
|---|------------------------------------|
| XIII. NERVA [Nervous] | 96 |
| XIV. TRAJAN [Trank] | 98 |
| XV. ADRIAN [Adribap] | 117 |
| XVI. ANTONINUS Pius [Antlip] | 137 |
| XVII. ANTONINUS Philosophus s. [Ant- phibsa] | 161 |
| XVIII. COMMODUS s. [Commódbeiz] | 180 |
| XIX. PERTINAX | } [Pert-juli- [sant]] 193 |
| XX. Didius JULIANUS | |
| XXI. Septimius S-everus | |
| XXII. CARACALLA & Geta ss. [Car. Gdab] | 211 |
| XXIII. MACRINUS & Dia- dumenus | } [Mac-Dhe- dap-k] } 217 218 |
| XXIV. HELIOGABALUS | |
| XXV. ALEXANDER S-everus [Al-sédd] | 222 |
| XXVI. M-aximinus and M-aximus [Mmetu] | 235 |
| XXVII. PUPIENUS and B-albinus [Pu-bdik] | 238 |
| XXVIII. GORDIAN [Gordin] | 239 |
| XXIX. PHILIP [Pheff] | 244 |
| XXX. DECIUS [Decidon] | 249 |
| XXXI. ° GALLUS & VOLUSIAN [Gal-vódlá] | 251 |
| XXXII. VALERIAN [Valéreli] | 253 |

° GALLUS. Between Gallus and Valerian, some writers rank Emilian among the number of emperors; but because he was never established in the empire, nor his title generally acknowledged, others more justly place him only among the usurpers.

| | Anno Domini |
|--|-------------|
| XXXIII. GALLIENUS [Galndauz] | 260 |
| XXXIV. PFLAVIUS CLAUDIUS [Clesk] | 268 |
| XXXV. AURELIAN [Aurepz] | 270 |
| XXXVI. TACITUS [Tacidoil] | 275 |
| XXXVII. PROBUS [Probdois] | 276 |
| XXXVIII. CARUS and his sons CARINUS and Numerian [Car-Cnudke] | 282 |
| XXXIX. Dioclesian and Maximian [Di- maxdeif] | 284 |
| XL. Constantius CHLORUS and GALE- rius [Chlo-galtyt] | 303 |
| XLI. 9CONSTANTINE the Great [Constys] | 306 |
| XLII. FILII CONSTANTINI, the three sons of Constantine, viz. Constan- tine, Constantius, and Constans [Fil-constip] | 337 |
| XLIII. JULIAN, nephew to Constantine the Great [Julisa] | 361 |
| XLIV. JOVIAN [Jovtauf] | 364 |

The Memorial Lines.

Nervous, Trank, Adribap, Ant-bip, Ant-phibsa, Com-
módbeiz,
Pert-juli-sant, Car-Gdab, Mac-Dhedap-k, Al-sédd,
Mmetu, Pu-bdik,
Gordin, Pheff, Decidon, Gal-vódlá, Valéreli, Galndauz,
Clesk, Aurepz, Tacidoil, Probdois, Car-Cnudke, Di-max-
deif,
Chlo-galtyt, Constys, Fil-constip, Julisa, Jovtauf.

PFLAVIUS CLAUDIUS. Upon the death of Claudius, Aurelian was unanimously chosen by the army: and at the same time Quintillus, brother to Claudius, was proclaimed Emperor in Italy, and his election allowed by the senate; but finding himself unable to support his cause against Aurelian, he dispatched himself, by causing his veins to be opened, after a short reign only of seventeen days, before he was rightly settled in his empire; for which reason he is here omitted.

9CONSTANTINE was saluted Emperor of the West upon the death of his father Constantius Chlorus; but was not sole monarch till the defeat and death of LICINIUS, An. Dom. 323. [Licinitet.] He removed the imperial seat to BYZANTIUM in the year 330. [Byzantiz.]

TABLE XXIV.

The Division of the Empire.

| EASTERN. | | WESTERN. | |
|--------------------|-------|---------------------|-------|
| | A. D. | | A. D. |
| VALENS [Valiso] | 364 | VALENTINIAN | 364 |
| THEODOSIUS MAG- | 379 | [Valtinitauf] | 375 |
| nus [The-magtoin] | | GRATIAN [Gratoil] | |
| ARCADIUS [Arctoul] | 395 | VALENTINIAN the Se- | 383 |
| THEODOSIUS JUNIOR | 408 | cond [Val-sikt] | |
| [Theo-júnozei] | | HONORIUS [Honotni] | 393 |
| MARCIAN [Marcolz] | 450 | VALENTINIAN the | 424 |
| LEO [Léoloi] | 457 | third [Va-tódo] | |
| ZENO [Zenofpo] | 474 | MAXIMUS AVITUS | 455 |
| ANASTASIUS [Ana- | 491 | [Max-aviful] | |
| stafna] | | MAJORIAN Majolp] | 457 |
| JUSTIN [Justlak] | 518 | * * * * | |
| JUSTINIAN [Justi- | 527 | AUGUSTULUS, in | 475 |
| nilep] | | whom ended the | |
| * * * * | | western empire | |
| PHOCAS [Phocauze] | 602 | [Augustfoil] | 800 |
| * * * * | | The restoration | |
| LEO ISAURICUS [Le- | 717 | of the western | |
| Ispap] | | empire by | |
| * * * * | | CHARLEMAGNE | |
| IRENE [Irénpoup] | 797 | [Charlmeig] | |
| BASILIIUS MACEDO | 867 | * * * * | |
| [Bas-macekaup] | | OTHO MAGNUS | 936 |
| * * * * | | [Oth-magnis] | |
| LEO PHILOSOPHUS | 886 | * * * * | |
| [Leo-phetis] | | HENRICUS QUARTUS | 1057 |
| * * * * | | [Hen-quarbzup] | |
| ALEXIUS COMNE- | 1081 | * * * * | |
| nus [Al-cazka] | | FREDERICK ÆNO- | 1152 |
| * * * * | | barbus [Ænbale] | |
| MICHAEL PALÆO- | 1261 | * * * * | |
| logus [Micha- | | FREDERICUS SECUN- | 1217 |
| paladsa] | | dus [Frebdap] | |
| * * * * | | * * * * | |

CONSTANTINOPLE taken in the reign of Constantine Palæologus the last Emperor of the East [Constantinobli] see page 11. 1453

The Memorial Lines.

Eastern Emperors.

Valiso, The-magtoin, Arctoul, Theo-júnozei, Marcolz,
Léoloi, Zenoffo, Anastafna ———
Justlak, Justinilep, Phocauze, Le-Ispap, Irénpoup,
Bas-macekaup, Leo-pheiks, Al-cazka, Micha-paladsa.

Western Emperors.

Valtinitauf, Gratoil, Val-sikt, Honotni, Va-tódo,
Max-aviful, Majolp ——— Augustfoil ———
Charlmeig, Oth-magnis, Hen-quarbzup, Ænbale
Frebdap.

It was not agreeable with the author's design to give a *complete* table of all the Eastern and Western Emperors. The succession was carried down to the sixth century; and after that, only a few are added of such as were most remarkable: to which it may not be improper to subjoin those persons who were famous for wasting and ravaging the Roman empire.

| | An. | Dom. |
|--|-----|------|
| ALARIC, king of the Goths, besieges, takes, and plunders Rome [Alrobz] | } | 410 |
| ATTILA, king of the Huns, called the scourge of God, ravages Italy [Attifla] | | |
| GENSERIC the Vandal sacks Rome [Gensful] | | 455 |
| ODOACER, king of the Heruli, makes himself master of Italy, and assumes the name of king [Odops] | } | 476 |
| THEODORIC, king of the Ostrogoths, drives Odoacer from Rome, and kills him with his own sword [Theódoni] | | |
| TORILAS the Ostrogoth takes Rome [Totlop] | | 547 |
| Alrobz, Attifla, Gensful, Odops, Theódoni, Totlop. | | |

TABLE XXV.

Eastern General Councils. See page 5.

| Place. | Pope. | Emperor. | Heretics. | After Christ. Year. |
|-------------------------|-----------|--------------------------|-------------------------------|------------------------|
| I. Nice | SILVESTER | CONSTANTINE | ARIUS | 325 |
| II. CONStan- tinople | DAMASUS | THEodosius Magnus | MACEDO- nians | 381 |
| III. EPHEsus | CElestine | THEod. jun. | NEstorians | 431 |
| IV. CHAL- cedon | LEO | MARCian | Eutyches & Dio- scorus. | 451 |
| V. CONStan- tinople | Vigilius | JUSTinian | Origenists | 553 |
| VI. Con- stantinople | AGatho | CONstantine POgonatus | MONothe- lites | 680 |

The Memorial Lines.

Nicsilcon-áritel, Codathé-mateib, Ephcethe-nésfib,
Chállemar-eudíola, Covijúst-Olut, C-ágcopo-monseiz.

Western General Councils.

| | | | |
|-----------------------------|------|----------------------|------|
| I. LATERAN | 1122 | I. LYONS | 1255 |
| II. LATERAN | 1139 | II. LYONS | 1274 |
| III. LATERAN | 1175 | [LYodúl-doif] | |
| IV. LATERAN | 1215 | VIENNA [Vítáa] | 1311 |
| V. LATERAN | 1517 | CONSTANCE [Constfáf] | 1414 |
| [Latbéd-in-oil- dal-lap] | | BASIL [Basfia] | 1431 |
| | | FLORENCE [Florénfin] | 1439 |
| | | TRENT [Trenalol] | 1545 |

The Memorial Lines.

Latbéd-in-oil-dal-lap, Lyodúl-doif, Vítáa, Constfáf,
Basfia, Florénfin, Trenalol ———

N. B. A thousand is to be added. Note also, that the second and third Lateran being in the same century with the first, *b* is left out; as *bed-in-oil*, instead of *bed-bin-boil*; the syllables in order answering to the order of the Councils.

Councils not Œcumenical.

| | | | | | | | |
|------------------|---|---------|---|-----|--|--------------------|-----|
| ANCYRA | } | [Anc- | } | 315 | | ANTIOCH [Antob] | 341 |
| NEOCÆSAREA | | neotal] | | | | SARDICA [Sardisp] | 347 |
| GANGRA [Gangtoz] | | | | 340 | | LAODICEA [Laódisa] | 361 |

Anc-neotal, Gangtoz, Antob, Laódisa, Sardisp.

TABLE XXVI.

Fathers, Heretics, &c.

| | Flourished An. Dom. |
|----------------------------------|---------------------|
| HERMAS PASTOR [Herm-pastaul] | 65 |
| CLEMENS ROMANUS [Clé-romaul] | 65 |
| IGNATIUS [Ignabza] | 101 |
| POLYCARP [Polycarázei] | 108 |
| JUSTIN MARTYR [Jus-marboz] | 140 |
| IRENÆUS [Irasp] | 167 |
| THEOPHILUS ANTIOCHENUS [Thask] | 168 |
| ATHENAGORAS [Athnapp] | 177 |
| CLEMENS ALEXANDRINUS [Cl-éxane] | 192 |
| TERTULLIAN. [Tertand] | 192 |
| MINUTIUS F-elix [Min-fdez] | 220 |
| ORIGEN [Oretz] | 230 |
| GREGORY THAUMATURGUS [Thaumelf] | 254 |
| CYPRIAN martyred [Cyprelk] | 258 |
| LACTANTIUS [Lactantyl] | 303 |
| ARNOBIOUS [Arntyt] | 303 |
| EUSEBIUS PAMPHILIUS [Eu-pamtal] | 315 |
| ATHANASIUS [Athates] | 326 |
| CYRIL OF JERUSALEM [Cyr-jilz] | 350 |
| HILARY [Hilarilf] | 354 |
| EPIPHANIUS [Epiphánisk] | 368 |
| EPHRAIM SYRUS [Eph-syrtoiz] | 370 |
| BASIL MAGNUS [Bas-magtoiz] | 370 |
| GREGORY NAZIANZEN [Greg-naztoiz] | 370 |
| MACARIUS [Macaript] | 373 |
| AMBROSE [Ambrotpo] | 374 |
| JEROME [Jeromtoik] | 378 |
| EVAGRIUS [Evagteiz] | 380 |

| | Flourished An. Dom. |
|-----------------------------------|---------------------|
| RUFINUS [Rufinz] | 390 |
| AUSTIN or Augustin [Austins] | 396 |
| CHRYSOSTOM [Chrysotouk] | 398 |
| CYRIL of ALEXANDRIA [Cyr-alexóbe] | 412 |
| PHILO Judæus [Phil-jufy] | 40 |
| JOSEPHUS [Joséphaupt] | 67 |
| AQUILA [Aquibek] | 128 |
| THEODOTIION [Theodótapu] | 175 |
| SYMMACHUS [Symchézb] | 201 |

Heretics.

| | |
|----------------------------------|-----|
| CERINTHIUS [Cerintheiz] | 80 |
| PAPIAS [Papauz] | 110 |
| BASILIDES [Basilibbe] | 112 |
| VALENTINIAN [Valentady] | 120 |
| MARCIAN [Marcboz] | 140 |
| HERMOGENES [Hermogapy] | 170 |
| MONTANUS [Montápe] | 172 |
| NOVATIAN [Novdua] | 251 |
| PAULUS SAMOSATANUS [Pau-samdauz] | 260 |
| MANES [Manep] | 277 |
| ARIUS [Aritel] see page 6. | 325 |
| DONATUS [Dónaten] | 329 |
| EUNOMIUS [Eunomitauz] | 360 |
| PRISCILLIAN [Priscitpa] | 371 |
| PELAGIUS [Pelagiózu] | 405 |

Writers against Christianity.

| | |
|------------------------|-----|
| CELSUS [Celsbuz] | 150 |
| HIEROCLES [Hierocléze] | 202 |
| PORPHYRY [Porphepy] | 270 |
| ZOSIMUS [Zosfel] | 425 |

The Memorial Lines.

Herm-pastaul, Clé-romaul, Ignabza, Polycarázei,
 Jus-marboz, Irasp, Thask, Athnapp, Cl-éxane, Tertand,
 Min-fdez, Oretz, Thaumelf, Cyprellk, Lactantyt & Arntyt,

Eu-pamtal, Athates, Cyr-jilz, Hilarilf, Epiphánisk,
Eph-syr-Bas-Gregotoiz, Macaript, Ambrotpo, Jerom-
toik,

Evagteiz, Rufinz, Austins, Chrysotouk, Cyr-alexôbe.

Phil-jufy, Joséphaup, Aquibek, Theodótapu, Symchézb.

Cerinthez, Papaaz, Basilibbe, Valentady, Marcboz,

Hermogapy, Montápe, Pau-samdauz, Novdua, Manepp,

Dónaten, Eunomitauz, Priscitpa, Pelagiózu.

Celsbuz, Hierocléze ——— Porphepy, Zosfel.

TABLE XXVII.

Popes, Authors, Famous Men, &c.

| | An. Dom. | | Bef. Christ |
|----------------------------|----------|-----------------------------|-------------|
| LIBERIUS [Libertle] | 352 | HIPPARCHUS [Hip- parbse] | 162 |
| ZOSIMUS [Zosoap] | 417 | | |
| LEO-MAG [Leo-moff] | 444 | | |
| GELASIUS [Gelásone] | 492 | | |
| JOAN [Joankof] | 844 | | |
| URBIN VI. } Anti- | | ONKELOS [Onkelkoi] | 87 |
| CLEMENT VII. } Popes. | | TACITUS [Tacitázei] | 108 |
| [Urb-s-Cle-p-atoip] | 1377 | AULUS GELLIUS [Gel- aad] | 112 |
| LEO X. [L-az-blat] | 1513 | PAUSANIAS [Pausato] | 134 |
| GREGORY XIII. } 1572 | | GALEN [Galbot] | 143 |
| [Gregobi-bápe] | | DIODEGENES LAERTIUS } 147 | |
| SEXTUS QUINTUS } 1585 | | [Laertbop] | |
| [S-quin-aleil] | | PRUDENTIUS [Prudinp] | 397 |
| CLEMENT VIII. } 1592 | | EUTROPIUS [Eu- tropfek] | 428 |
| [Cle-k-aloud] | | MERLIN [Merlopoi] | 477 |
| | | HESYCHIUS [He- schfoun] | 499 |
| SANCHONIATHON } 1193 | | PROCOPIUS [Procolip] | 537 |
| [Sanchabout] | | AGATHIAS [Agath- laup] | 567 |
| HERODOTUS [He- rodofus] | 456 | GILDAS [Gildusp] | 567 |
| MANETHO [Ma- nethky] | 280 | BEDE [Bedsaus] | 666 |
| BEROSUS [Berodsou] | 269 | | |

| | An. Dom. | | An. Dom. |
|-----------------------------------|----------|------------------------------------|----------|
| ZONARAS [Zona- rabbak] | 1118 | TYCHO Brahe Tychblos] | 1546 |
| GRATIAN [Gratabla] | 1151 | GALILÆO [Gali- lasfe] | 1642 |
| BALSAMON [Bal- about] | 1191 | ERASMUS obit [Erasmuts] | 1536 |
| Petrus Lombardus [Lombalk] | 1158 | ROBERT Stephens ob. [Ro-stlun] | 1559 |
| THOMAS Aquinas [Thom-aquads] | 1263 | TURNEBUS [Turn- laul] | 1565 |
| PETRARCH [Petrattu] | 1335 | HENRY Stephens ob. [Hen-stelsi] | 1563 |
| PTOL. GEOGRAPH [Ptol-gëografz] | 140 | THUANUS Histori- cus [Thuansap] | 1617 |
| COPERNICUS [Co- pérnicafoit] | 1473 | | |

The Memorial Lines.

Libertle, Zosoap, Leo-moff, Gelásone, Joanhof,
Urb-s-Cle-p-atop, L-az-blat, S-quin-aleil, Cle-k-aloud,
Gregobi-bûpe.

Sanchabout, Herodofus, Manetheky, Hipparbse, Be-
rodsou.

Onkelkoi, Gelaad, Tacitázei, Pausato, Galbot,
Laerthop, Prudinp, Eutropfek, Merlopoi, Heschfoun,
Procolip, Agathlaup, Gildusp, Bedsaus, Zonarabbak,
Gratabla, Balaboub, Lombalk, Thom-aquads, Petrattu,
Ptol-gëografz, Tychblos, Copérnicafoit, Galilasfe,
Erasmuts, Ro-stlun, Turnlaul, Hen-stelsi, Thuansap.

*The Time when any Author or famous Man flourished
may also be known in general, as follows.*

| | |
|---|--------------|
| VITRUVIUS in the time of | JULIUS Cæsar |
| Dionysius HALICARNAS- sensis under } | AUGUSTUS |
| STRABO | TIBERIUS |
| SILIUS ITALICUS | NERO |
| Quintus CURTIUS | VESPASIAN |
| PLUTARCH } | TRAJAN |
| APPIAN } | |

| | |
|--------------------------------|-------------------|
| ARRIAN <i>flourished under</i> | ANTONINUS Pius |
| ULPIAN | SEVERUS |
| PROSPER | THEODOSIUS junior |
| OROSIUS | |
| ZOSIMUS | |
| JORNANDES | JUSTINIAN |

The Memorial Lines.

Vitruv-jul, Halic-aug, Strab-tib, Sil-Itál-nero, Curt-
vesp,
Plut-Appi-tra, Arri-antr, Ulp-sev, Pros-OróZ-theo,
Jorn-just.

TABLE XXVIII.

The Founders of the States of Europe.

| The first | | | An. Dom. |
|-----------|--------------------|-----------------------|----------|
| | Bishop of Rome | St. Peter [Pest] | 43 |
| | Pope | HYGINUS [Hygalo] | 154 |
| | Imperii ORIENTIS | GALERIUS [Ori-galtyt] | 303 |
| | Emperor of CON- | ARCADIUS [Const- | } 395 |
| | stantinople | arctoul] | |
| | TURKISH Emperor | OTTOMAN [Turk- | } 1295 |
| | | ottomadnoi] | |
| | Emperor of the Ro- | JULIUS CÆSAR before | } 46 |
| | mans | Chr. [Rom-jufs] | |
| | King of ITALY in | ODOACER [Ital-ódops] | 476 |
| | the Empire | | |
| | Emperor of GER- | CHARLEMAGNE [Ger- | } 800 |
| | many | charlmeig] | |
| | King of FRANCE | PHARAMOND [Fran- | } 420 |
| | | pharamódy] | |
| | King of Spain | ATHAULPHUS | } 410 |
| | | [Sp-athfaz] | |
| | King of Portugal | ALPHONSUS [Port- | } 1139 |
| | | alabin] | |
| | King of Scotland | FERGUS before Christ | } 332 |
| | | [Scot-fergtid] | |
| | King of ENGLAND | EGBERT [Engkek] | 828 |
| | King of POLAND | BOLESLAUS [Ptol- | } 1000 |
| | | bolath] | |

| | | | | | |
|---------|---|-----------------|------------------|------------|-----|
| The 1st | { | King of DENmark | OLAUS [Den-olak- | } An. Dom. | 809 |
| | | King of SWEDEN | Bero [SWE-Bkib] | | |

The Memorial Lines.

Pest, Hygalo, Ori-galtyt, Const-arctoul, Turk-ottomadnoi,
 Rom-jufs, Ital-ódops, Ger-charlmeig, Fran-pharamódy,
 Sp-athfaz, Port-alabin, Scot-fergtid, Pol-bolath, Engkeh,
 Den-olakzou, SWE-Bkib.———

TABLE XXIX.

The Times of the Writing of the Canonical Books of the New Testament.

| An. Dom. | | | An. Dom. | | | |
|-------------|--------------|--------|--------------|----------------------|----------|----|
| 1 | Thessal. } | [Thes- | 52 | Titus and } | [Ti- | 65 |
| 2 | Thessal. } | le-t] | 53 | 1 Timothy } | timsu] | 65 |
| 1 | Peter [Pelf] | | 54 | 2 Peter } | [Sec-pe- | 67 |
| Galatians | | | | 2 Timothy } | timaup] | 67 |
| 1 and 2 | COrinthians | | 57 | Jude [Judpa] | | 71 |
| Romans | [Gá-co-rup] | | | Revelations [Revnau] | | 96 |
| Philippians | | | | John Gospel and | | 97 |
| Colossians | } Phi- | } 62 | | Epistles [Jonp] | | 97 |
| E-phesians | | | } E-ph- | Matthew [Mólb or | | 41 |
| Philemon | | | | Matfa] | | 41 |
| James | | | Mark [Marot] | | 43 | |
| Hebrews | [Hebsi] | 63 | Luke [Laub] | | 61 | |
| | | | Acts [Acst] | | 63 | |

The Memorial Lines.

Thes-le-t, Pelf, Gá-co-rup, Phi-col-E-ph-jase, Hebsi,
 Ti-timsu,
 Sec-pe-timaup, Judpa, Revnau, Jonp, Mólb, Marot,
 Laub, Acst.

TABLE XXX.

The Provincial and Legatine Constitutions, according to the Order in which they were made.

| Constitutiones Editæ A. D. | | Editæ A. D. | |
|----------------------------|---------|-----------------------|--------|
| STEPHANI [Stephede] | 1222 | R. WINChelsey | } 1305 |
| RICARDI [Ricardiz] | 1230 | [Winchtyl] | |
| EDMUNDI [Edmun- | } 1236 | WALTER [Walted] | 1322 |
| dis] | | SIMON MEFHAM | } 1328 |
| OTHONIS Card. Le- | } 1237 | [Si-mephstek] | |
| gati [Othdip] | | J. STRATFORD | } 1342 |
| BONIFACII [Bonesa] | 1261 | [Stratfotod] | |
| OTHOBONI Card. | } 1268 | S. ISLEPE [Isleptaud] | 1362 |
| Leg.[Othobdauk] | | S. LANGHAM | } 1367 |
| J. PECcham apud | } 1279 | [Langhisp] | |
| READING [Pec- | | S. SUDBURY [Sud- | } 1378 |
| readdoin] | butoik] | | |
| Ejusdem, apud | } 1281 | T. ARUNdel [A- | } 1408 |
| LAMBeth [Pec- | | runfyk] | |
| lambeka] | | H. CHICHley | } 1415 |
| | | [Chichfal] | |

The Memorial Lines.

Stephede, Ricardiz, Edmundis, Othdip, Othobdauk, Bonesa, Pec-readdoin, Winchtyl, Pec-lambeka, Walted, Si-mephstek, Stratfotod, Isleptaud, Chichfal, Arunfyk, Sudbutoik, & Langhisp. ———

GEOGRAPHICA.

SECTION III.

The Application of this Art to Geography.

IN the first place are laid down the general divisions of Europe, Asia, Africa, and America; then the particular divisions of the several states of Europe, into their respective governments or provinces. For every division there is one *technical* line, composed of the first syllable (or sometimes only of the first letters) of the parts or places into which it is subdivided; which syllables or letters are distinguished from the rest, in the tables, by small capitals, or an hyphen following.

It is further to be observed, that the beginning, middle, and ending of the line, answer, in order, to the *northern*, *middle*, and *southern* divisions of the kingdoms or countries; so that not only the places themselves, but, in some measure, their situation with respect to each other, may be remembered at the same time. Thus, in the *memorial line* for France, as it was before the Revolution, Fra=P Nor-I-cham; Bret-O-BouL; Guí-La-DaP.

P Nor-I-cham denotes the four *northern* governments, viz. P-icardy, NORMANDY, I-sle of France, and CHAMPAGNE.

Bret-O-BouL denotes the four *middle* governments, viz. BRETAGNE, O-rleanois, BOURGOGNE, and L-ion-nois.

Guí-La-DaP denotes the four *southern* governments, viz. GUIENNE with GASCONY, LANGUEDOC, DAUPHINY, and P-rovence.

It will be yet some further help to remember the situation of places, to observe, that in the several

divisions I begin at the *west*, and go to the *eastward*, as far as the limits of the country will allow, in a straight line, unless where the irregularity of the position makes this method inconvenient or impracticable; where that is the case, the reader will supply the defect by his own observation, and by comparing with proper maps.

Observe further, that where the syllables are connected with an hyphen, the countries denoted by them are contiguous from west to east; thus,

Nor-I-cham shews that the Isle of France joins to Normandy on the east, and Champagne to the Isle of France on the east. Where the syllables or letters denoting two or more countries are joined together without an hyphen, there the countries are contiguous from north to south. Thus, Guí-La-DaP shews that Languedoc joins to Guienne on the east, Dauphiny and Provence to Languedoc on the east; and also that Provence is contiguous to and south of Dauphiny. Such syllables as have an hyphen preceding, but are not by it immediately joined to the foregoing syllable, signify that the countries denoted by them lie eastward, but are not contiguous. Thus, Sp -It -Turk shews that Italy is east of Spain, and Turkey east of Italy, but not contiguous.

When the reader is become well acquainted with the *general divisions*, he may then go on to charge his memory with the chief cities and most remarkable places of every country, their longitude and latitude, the correspondence of ancient and present geography, the geography of the Old and New Testament, the proportions of the states of Europe to Great Britain, the situation of the most noted islands, with other instructive and entertaining particulars in geography; all which he will find himself able to remember with greater ease than he could possibly have supposed before he became acquainted with the *memorial lines* contrived for that purpose.

TABLE I.

*The general Divisions of Europe, Asia, Africa,
and America.*

I. EUROPE is divided into,

1. *Northern*; containing NORway, S-weden, RUssia; D-enmark;
2. *Middle*; comprising the Netherlands, Germany, Poland, Little T-artary; FRANCE, SWITZERLAND, HUNGARY, TRANSILVANIA, MOLDAVIA, WALACHIA.
3. *Southern*; consisting of Spain with Portugal; Italy, TURKEY.

The Memorial Line.

EUR=No-S-Ru D; Né-Ge-Po-LT; Fran-Switz;
Hun-Tran-Mo-Wa; Sp -It -Turk.

II. ASIA is divided into,

1. *Northern*; containing Great TARTARY, GEORGIA.
2. *Middle*; including TURKEY in Asia; PERSIA, Empire of the MOGul, CHINA.
3. *Southern*; comprehending ARABIA, East INDIES.

The Memorial Line.

AS=Ta-Geo; Tur-Pé-Mo-Chin; Arab-Ind. ———

III. AFRICA is divided into,

1. *Northern*; containing Barbary, BILdulgerid, E-gypt.
2. *Middle*; subdivided into ZAARA, NEGroland, GUINEA, N-ubia.
3. *Southern*; consisting of CONGO, ABISSINIA, coast of ABEX, coast of CAFraria, MONOMOTAPA, ZANGUEBAR, coast of AJAN.

The Memorial Line.

AF=BáBil-E; ZÁNeGui-N; Con-Abíss-Abex,
Caf-Mono-Zangu-Aj.

IV. AMERICA is divided into,

1. *N-orthern*; containing New WALES, New BRI-

tain, LOUISIANA, CANADA MEXICO, FLORIDA, CAROLINA, VIRGINIA, MARYLAND, PENNSYLVANIA, NEW YORK, NEW JERSEY, NEW ENGLAND, lying from south-west to north-east.

2. *S-outhern*; including Terra FIRMA, PERU, country of the AMAZONS, BRAZIL, CHILI, PARAGUAY, Terra MAGellanica.

The Memorial Lines.

N-AM=Wal-Brit, Lóuis-Can, Mex-Flor, Cár-Vi-M,
P-YorJ Eng.

—S-AM=Firm, Per-Amáz Bra, Chi-Par, Mag.

TABLE II.

The particular Divisions of Northern Europe.

I. NORWAY is divided into five parts or governments, viz.

WARDhuys (including F-inmark and Norwegian LAPland) DRONtheim, BERgen, ANSlo.

II. SWEDEN was divided into four general parts, viz.

Swedish LAPland with B-othnia intermingled, SWEDEN proper, FINland (lately seized by RUSSIA) and GOTHland.

III. DENMARK contains

The peninsula of JUTland, ZEaland, and the lesser isles.

IV. RUSSIA contains many provinces, the most considerable of which are,

Northern; LAPland, DWina or Archangel.

Middle; FINland, ESThonia, LIVonia, INGria, NOVGorod, MOSCOW.

Western; LITHuania, POLOtsk, MOHilev, UKRAINE, BELGorod.

Southern; BUDziak Tartary, CRIM Tartary or TAURIDA, VORONEZ, DON KOZACKS.

The Memorial Lines for Northern Europe.

NOR=Ward (F-Lap) DroBerAns. SWED=Lá (B)
Swep-Fin Goth.

DEN=Jut-Zea —————

RUSS=Lap-Dwi; FinEst Liv; Ing-Nov-Mosc; Lith-
Pol-Mo-Ukr-Bel; Bud-Crim-Vor-Donk.

TABLE III.

The particular Divisions of Middle Europe.

1. The NETHERLANDS, or Low Countries, heretofore were generally distinguished into the United or Dutch Netherlands lying to the north, frequently called Holland, and the former Spanish Netherlands to the south, often called Flanders, from the most remarkable province in each.

The United Netherlands, now incorporated with France, formerly were divided into seven provinces, viz. FRIESLAND, GRONINGEN, OVERYSSSEL, HOLLAND, UTRECHT, GUELDERLAND with ZUTPHEN, ZEELAND.

The Spanish Netherlands, now swallowed up by France, were usually divided into these ten provinces, viz. FLANDERS, BRABANT, MARQUISATE of the empire within Brabant, seignory of MALINES within Brabant, part of GUELDERLAND, LIMBURG, ARTOIS, HAINAULT, NAMUR, LUXEMBURG.

HOLL=Fries-GrOv H-U-Gue-Zu Z; Fla-B (Mar-Ma) GLim Art-Hai-Na-Luxem.

II. GERMANY was divided into nine circles:

Three northern; circle of WESTPHALIA, circle of lower SAXONY, circle of upper SAXONY.

Three middle; circle of lower RHINE, circle of upper RHINE, circle of FRANCONIA.

Three southern; circle of SUABIA, circle of BAVARIA, circle of AUSTRIA.

To which may be added, the kingdom of BOHE-

MIA distinguished into four general parts, viz. Lusatia, Silesia, BOHemia Proper, MORAVIA.

GERM=We-Sal-up; Rhil-u-Fran; Sua-Bav-Aus.

BOHE=Lusa-Si-Bop-Mor.

III. POLAND was divided into two general parts; the duchy of Lithuania, and the kingdom of Poland properly so called.

Lithuania, consisting of the duchy of Courland, Samogitia, LITHUania proper.

The kingdom of Poland contained PRUSSIA, POLACHIA, MAZOVIA, Poland magna, Poland parva, little RUSSIA, VOLHINIA, PODOLIA.

POL=CouSa-Lith, Pru-Polach, Maz, Polmapa, Rus-VolhiPodol.

IV. FRANCE was divided into twelve governments, now, including the conquered countries, into about 120 departments:

Four northern; P-icardy, NORMANDY, I-sle of France, CHAMPAGNE.

Four middle; BRETAGNE, O-rleannois, BOURGOGNE, L-ionnois.

Four southern; GUIENNE with Gascony, LANGUEDOC, DAUPHINY, P-rovence.

To which may be added, the other countries comprehended within the compass of Old Gaul, viz.

LORRAIN, east of CHAMPAGNE.

SAVOY, east of BOURGOGNE or BURGUNDY and DAUPHINY.

SWITZERLAND, east of FRANCHÉ COMPTÉ.

FRANCHÉ COMPTÉ, east of BURGUNDY.

FRA=P Nor-I-Cham; Brét-O-BouL; Guí-La-DaP. LorCh, SavBuDa, SwiC, CoB.

TABLE IV.

The particular Divisions of Southern Europe.

I. SPAIN (excluding Portugal) may be divided into two general parts:

Northern; containing eight provinces, viz. Galicia, Asturias, Biscay, Navarre, Aragon, Catalonia, Leon, Old (*vetus*) Castile.

Southern; containing five provinces, viz. New (*nova*) Castile, Valencia, Andalusia, Murcia, Granada.

SPA = Gál-A-Bisc-N-Ara-Cat, Lé-Casvet; Casno-Val, And-MurG.

II. ITALY might formerly be distinguished into

Northern, or Lombardy; containing Piedmont, Montserrat, Milan, Genoa, Venice, Mantua, Parma, Mirandola, Modena.

Southern; Lucca, Tuscany or Etruria, the Papacy or States of the Church, Naples.

IT = Lom (=Pi-Mont-MilG, VenManPa-Mi-Mód)
Lu-Tu, Pap-Nap.

III. TURKEY in EUROPE may be distinguished into

Northern; containing Bessarabia, Croatia, Dalmatia, Bosnia, Servia, Bulgaria.

Southern; containing Albania, Macedonia, Romania, Chimeria, Janna, Livadia, Morea.

TURK = Bess, CroD-Bó-Se-Bulg; Alb-Mac-Rom, Chim-Ja, LivadMor.

The Memorial Lines for all Europe.

NOR = Ward (F-Lap) Dro-BerAns. SWED = Lá (B)
Swepe-Fin Goth.

DEN = Jut-Zea —————

RUSS = Lap-Dwi; FinEstLiv; Ing-Nov-Mosc; Lith-Pol-Mo-Ukr-Bel; Bud-Crim-Vor-Donk.

HOLL = Fries-GrOv H-U-Gue-Zu Z; Fla-B (Mar-Ma) GLim Art-Hai-Na-Luxem.

GERM = We-Sal-up; Rhil-u-Fran; Sua-Bav-Aus.

BOHE = Lusa-Si-Bop-Mor.

POL = CouSa-Lith, Pru-Polach, Maz, Polmapa, Rus-VolhiPodol.

FRA=P Nor-I-Cham; Brét-O-BouL Guí-La-DaP.
LorCh, SavBuDa, SwiC, CoB.

SPA=Gál-A-Bisc-N-Ara-Cat, Lé-Casvet; Casno-Val,
And-MurG.

IT=Lom (=Pi-Mont-MilG, VenManPa-Mi-Mód)
Lu-Tu, Pap-Nap.

TURK=Bess, CroD-Bó-Se-Bulg; Alb-Mac-Rom,
Chim-Ja, LivadMor.

TABLE V.

England, Wales, Ireland, and Scotland.

1. ENGLAND may be divided into three general parts, *northern, middle, and southern*; which all together contain 40 counties or shires.

The *northern* part of England contains 6 counties or shires:

On the west coast, from
north to south,

Cumberland
Westmoreland
Lancashire
[Cum-WeLa]

On the east coast, from
north to south,

Northumberland
Durham
Yorkshire
[NorDurYor]

The *middle* part of England contains 24 counties or shires:

On the west, joining to
Wales from N. to S.

CHeshire
Shropshire

Herefordshire

Monmouthshire

[CheShHeMon]

On the east coast, from
north to south,

Lincolnshire

{ N-orfolk
S-uffolk
Essex

[Li NSEss]

| | | |
|--|---|--|
| Between Lincoln- shire E. and Chesh. and Shropsh. W. | Between Norfolk and Suffolk E. and Herefordshire W. | Between Essex E. and Mon- mouthshire W. |
| Derbyshire NOtting- hamshire STAFFordshire LEicestershire R-utlandshire [De-No-Staf- Lei-R] | Worcestershires WARwickshire NORthamptonsh. B-edfordshire HUNtingdonshire C-ambridgeshire [Wor-Wá-No- B-Hun-C] | GLoucestershire O-xfordshire BUckinghamshire HERtfordshire M-iddlesex [Gl-O-Buc- HerM] |

The *southern* part of England contains 10 counties or shires :

| | |
|--|---|
| Between the Channel and the Severn sea. | Between the Channel and the Thames. |
| CORNwall DEVonshire SOMersetshire DORsetshire [Corn-Dév-So-Do] | WILTshire BERkshire HAMpshire SURrey S-ussex KENT [Wilt-BerHa-SurS-Ken] |

The Memorial Lines.

Cum-WeLa, NorDurYor, CheShHeMon, Li NSEss
De-No Staf-Lei-R,
Wor-Wá-No-B-Hun-C, Gl-O-Buc-HerM, Corn-
Dév-SoDo, Wilt-Ber-Ha-SurS-Ken.

The Division of England according to the Circuits.

| | |
|-------------------------------|--|
| WESTERN. | OXFORD. |
| Cor-dé-dor-ham, Som- wilt. | Ber-O-glouce-mon, wórcest-here-shrop-staff. |
| HOME. | MIDLAND. |
| Hert-éss-ken-sur-sus. | North-rut-linc, Derby-no- leice-war. |

NORFOLK.

Nórf-su-cam, Hun-béd-
buck.

NORTHERN.

Yor-dur-nor, lánca-we-
cumber.

II. WALES is divided into two general parts :

North Wales; containing Anglesey, Caernarvonshire, Denbighshire, Flintshire, Merionethshire, Montgomeryshire.

South Wales; containing Cardiganshire, Radnorshire, Pembrokeshire, Carmarthenshire, Brecknockshire, Glamorganshire.

The Memorial Lines.

W=Ang-Cá-De-Fli-*ch*, Meri-Mont-*sh*; Card-Radn-
here, Pem-Ca-BreGlam-*mon*.

N. B. The *italic* letters denote the adjoining counties of England; as *ch* Cheshire, adjoining to Flintshire: *sh* Shropshire, adjoining to Montgomeryshire; *here* Herefordshire; *mon* Monmouthshire.

III. SCOTLAND is divided into two general parts :

North Scotland, or Highlands, beyond the river Tay, containing 13 counties; among which are Strathnavern, Caithness, Sutherland, Ross, Lochabar, Murray, Braidalbin, Perth.

South Scotland, on this side the Tay, containing 20 counties; some of which are Argyre, Fife, Lothian, Aire, Galloway.

The Memorial Line.

SCOT=Strath-Caith, SúthRoss, Lock -Mur, BraiP;
Arg -Fi, Lo-Air, Gal.

IV. IRELAND is divided into four larger parts or provinces :

ULSTER to the north
MUNSTER to the south

LEINSTER to the east
CONNAUGHT to the west

The Memorial Line.

IREL=Ulst, Léin-Con, Munst.

TABLE VI.

Chief Cities and remarkable Places.

IN ANCIENT FRANCE.

| | |
|-------------------------------------|---------------------------------|
| Amiens ch. T. in <i>Picardy</i> | Bourdeaux in <i>Guienne</i> |
| P-aris in the <i>Isle of France</i> | Thoulouse in <i>Languedoc</i> |
| Rouen in <i>Normandy</i> | Grenoble in <i>Dauphiny</i> |
| Troyes } in <i>Champagne</i> | Dijon in <i>Burgundy</i> |
| Rheims } | Aix } |
| Rennes in <i>Bretagne</i> | Marseilles } in <i>Provence</i> |
| Poictiers in <i>Orleannois</i> | Orange } |

The Memorial Lines.

Ampica, Pisle, Rounor, Troy-rheicham, Rénbreta,
 Poictorl,
 Bourdgui, Thoulang, Grendau, Dijónburg, Aix-mar
 & Orprov.

IN THE NETHERLANDS.

| | |
|-------------------------------|------------------------------|
| Middleburg in <i>Zealand</i> | Dunkirk } in <i>Flanders</i> |
| Deventer in <i>Overyssel</i> | Douay } |
| Leuwarden in <i>Friesland</i> | Mons } |
| Brussels in <i>Brabant</i> | Cambray } |
| Bruges in <i>Flanders</i> | Loo in <i>Guelderland</i> |
| Charleroy in <i>Namur</i> | Antwerp in <i>Brabant</i> |

The Memorial Lines.

Midzea, Devóveryss, Leuwárfries, Brúsbraba, Brugflan,
 Charlnam, Dunk-dóuafland, Mon-cambhain, Looguel
 & Antbrab.

IN GERMANY.

| | |
|------------------------------|---------------------------------|
| Hamburg } ch. towns in | Francfort in <i>Upper Rhine</i> |
| Hanover } low. Saxony | Nuremburg in <i>Franconia</i> |
| Witten- } in <i>Upper</i> | Munster in <i>Westphalia</i> |
| berg } Saxony | Strasbourg } in <i>Upper</i> |
| Heidelberg } in <i>Lower</i> | } <i>Rhine</i> |
| Cologne } Rhine | Cleves in <i>Westphalia</i> |
| Munich in <i>Bavaria</i> | Vienna in <i>Austria</i> |
| Augsburg in <i>Suabia</i> | |

The Memorial Lines.

Hamb-hanosal, Witsup, Hei-colrhilo, Munbavar, Aug-
suab,
Francrhup, NurF, Munswest, Strasrhup, Clevwestpha,
ViennAust.

IN SPAIN.

| | |
|--------------------------------|--------------------------------|
| BILBOA in <i>Biscay</i> | PAMPELUNA in <i>Navarre</i> |
| COMPOSTELLA in <i>Gallicia</i> | SARAGOSSA in <i>Arragon</i> |
| SEVILLE in <i>Andalusia</i> | BURGOS in <i>Castile vetus</i> |
| BARCELONA in <i>Catalonia</i> | MADRID in <i>Castile nova</i> |
| OVIEDO in <i>Asturia</i> | TORTOSA in <i>Catalonia</i> |

The Memorial Lines.

Bilbis, Composgal, Sevandal, Barcatal, Ovast,
Pampelnav, Saragar, Burgcas-vet, Mad-ca-no Tortcat.

IN TURKEY IN EUROPE.

| | |
|-------------------------------|--------------------------------|
| SOPHIA } chief town in | TERGOVISK in <i>Walachia</i> |
| } <i>Bulgaria</i> | HERMAN- } in <i>Transyl-</i> |
| BELGRADE in <i>Servia</i> | stadt } <i>vania</i> |
| SERAIO in <i>Bosnia</i> | CHOCZIM in <i>Moldavia</i> |
| SPALATRO in <i>Dalmatia</i> | CONSTANTI- } in <i>Romania</i> |
| SALONICHI in <i>Macedonia</i> | nople |
| CARLSTAT in <i>Croatia</i> | |

The Memorial Lines.

Sophbul, Belgservi, Seraibos, Spalda, Salonmac,
Carlsacro, Tergówalach, Hermtransyl, Choczimo, Con-
strom.

TABLE VII.

Remarkable Places (sparsim) in Europe.

| | |
|--------------------------------|--------------------------------|
| FONTARABIA in <i>Biscay</i> | CASSEL in <i>Upper Rhine</i> |
| RATISBON in <i>Bavaria</i> | ARCHANGEL in <i>Dvina</i> |
| PADUA in <i>Venice</i> | HOCHSTET } in <i>Bavaria</i> |
| NIMEGUEN in <i>Guelderland</i> | BLENHEIM } |
| OLIVA in <i>Prussia</i> | St. OMERS in <i>Artois</i> |
| CONSTANCE in <i>Suabia</i> | VERDEN } in <i>lower</i> |
| AIX-LA-CHA- } in <i>West-</i> | BREMEN } <i>Saxony</i> |
| pelle } phalia | MAGDEBURG in <i>lo. Saxony</i> |
| MONTPE- } in <i>Langue-</i> | CALAIS in <i>Picardy</i> |
| lier } doc | BADEN in <i>Suabia</i> |

BENEVENTO in *Naples*
 BREDA in *Brabant*
 CADIZ in *Andalusia*
 AGINCOURT in *Artois*
 MITTAW in *Courland*
 MALAGA in *Granada*
 TRIERS in *lower Rhine*
 MAESTRICH in *Limburg*
 HAVRE- } in *Normandy*
 degrace }
 VALEDOLID in *Old Castile*
 TOLEDO in *New Castile*
 MEAUX in *Champagne*
 SOISSONS in *Isle of France*
 AVIGNON in *Provence*
 NASSAW in *upper Rhine*
 CITADELLA in *Minorca*
 CAGLIARI in *Sardinia*
 PALERMO in *Sicily*
 SLESWICK in *Jutland*
 BASTIA in *Corsica*
 CRACOW in *Poland parva*
 WARSAW in *Mazovia*
 BERGEN in *Norway*
 COPENHAGEN in *Zealand*
 NISMES in *Languedoc*
 CHRISTIANA in *Aggerhuys*
 TURIN in *Piedmont*
 RIGA in *Livonia*
 ROCHELLE in *Orleannois*
 GOTTENBURG in *Gothland*
 LUNDEN in *Sconen*
 CRESSY in *Picardy*
 SALAMANCA in *Leon*
 ZELL in *Lower Saxony*
 CHAMBERRY in *Savoy*
 DANTZIC in *Poland*
 STOCK- } in *Sweden*
 holm } proper
 PRESBURG in *up. Hungary*

CORDOVA in *Andalusia*
 CARTHAGENA in *Murcia*
 BESAN- } in *Franché*
 çon } Comté
 LIEGE in *Westphalia*
 CREMONA in *Milan*
 BATCHI- } in the *Penin-*
 serai } sula of *Little*
 } *Tartary*
 NANCY in *Lorraine*
 LEGHORNE } in *Tuscany*
 FLORENCE }
 GENEVA in *Switzerland*
 LISBON in *P-ortugal*
 RAGUSA in *Dalmatia*
 BRESLAW in *Silesia*
 PRAGUE in *Bohemia*
 STETIN in *Pomerania*
 PERPIGNAN in *Rousillon*
 TRENT in *Tyrol*
 STRASBURG in *Alsace*
 POLA in *Istria*
 POSEGA }
 PETERWA- } in *Sclavonia*
 radin }
 BERLIN in *Brandenburg*
 DRESDEN } in *Saxony*
 LEIPSIK }
 RAVENNA in *Romagna*
 LORETTO in *Ancona*

ROUSIL- } part of *Catalo-*
 lon } nia
 SCLAVONIA of *Hungary*
 TYROL of *Austria*
 POMERANIA } of *Upper*
 BRANDENBURG } *S-axony*
 SAXONY }
 } of the late *Vene-*
 ISTRIA } tian territories

| | | | |
|-------------------------|--|------------|--|
| ANCONA | $\left\{ \begin{array}{l} \text{part of the} \\ \text{Papacy or} \\ \text{states of the} \\ \text{Church} \end{array} \right.$ | BERRY | } of Orleannois |
| ROMAGNA | | ANJOU | |
| LIMOSIN part of Guienne | | HOLSTEIN | $\left\{ \begin{array}{l} \text{part of Lower} \\ \text{Saxony} \end{array} \right.$ |
| | | CAPITANATE | part of Naples |

The Memorial Lines.

Fontárabisc, Ratibav, Padven, Nimguélder, Olivprus,
 Conatsuab, Aix-la-chavest, Montpellang, Cassrhup &
 Archdwin,
 Hoch-blenhebav, Omerart, Verdbremsa-lo, Magdsa-lo,
 Calpic,
 Badsuab, Benvennap, Bredbrab, Cadandal, Agincart,
 Mitcourland, Malagran, Trierhi-l, Maestlimbur, Ha-
 vrednorm,
 ValedoloC, TolnewC, Meauxcham, Soissisle & Avig-
 prov,
 Nassrh-up, Citadelmin, Cagsard, Palersici, Slesjut,
 Bastcorsic, Cracopolp, Warsmazov, Bergeno, Copzeal,
 Nism langued, Christagg, Turínpiéd, Rigali, Rochorl,
 GoG, Lundscón, Cresspic, Salamancle, Zellsalo, Cham-
 sav,
 Dantzícpol, Stockswep, Prés-uphung, Cordandalu,
 Cartmur,
 Besfran-com, Liegewest, Cremmil, Batchtarta-pe, Nanlor,
 Log-Flortusc, Genswitz, LísP, Ragdal, Bressile, Pragbo,
 Stetpomeran, Perprou, Trentyr, Strasbalsa, Polistri,
 Pos-warasclav, Berlbran, Dres-Leipsax, Ravro, Lo-
 rettanc,
 Rouscatalon, Sclavhung, Tyrolaust, Pom-brand-saSup,
 Istren,
 Anc-Rompap, Limoguienn, Berr-Anjorl, Holstsalo,
 Capnap.

TABLE VIII.

*Some chief Cities and remarkable Places in Asia,
 Africa, and America.*

| | |
|------------------------|-------------------------|
| PEKIN capital of China | Ispahan in Persia |
| AGRA in India | ALEPPO capital of Syria |
| CHAMBALU in Tartary | CAIRO in Egypt |

| | |
|---------------------------------|--------------------------------|
| FEZ in <i>Barbary</i> | PORTROSE- } in <i>Nova</i> |
| DAARA in <i>Bildulgerid</i> | way } <i>Scotia</i> |
| TOMBUTE in <i>Negroland</i> | ASTREACHAN in <i>Tartary</i> |
| MONOMO- } in <i>Æthiopia</i> | NICOSIA in <i>Cyprus</i> |
| topa } <i>superior</i> | MOUSUL } in <i>Diarbec</i> |
| DANGOLA in <i>Nubia</i> | BAGDAT } |
| CHAXUMO } in <i>Æthiopia</i> | SMYRNA in <i>Natolia</i> |
| inferior } | AZOV in <i>Circassia</i> |
| S. FE in <i>Granada</i> | |
| S. SALVADOR in <i>Brazil</i> | NATOLIA } |
| S. JAGO in <i>Chili</i> | SYRIA } <i>Parts of</i> |
| Assumption in <i>Paraguay</i> | Diarbec } <i>Turkey</i> |
| QUEBEC in <i>Canada</i> | TURCOMANIA } <i>in Asia</i> |
| PHILADEL- } in <i>Pensilva-</i> | MINGRELIA of <i>Georgia</i> |
| phia } <i>nia</i> | CARAMANIA } <i>of Nato-</i> |
| JAMES TOWN in <i>Virginia</i> | AMASIA } <i>lia</i> |
| BALTIMORE in <i>Maryland</i> | NATOLIA prop. } <i>largely</i> |
| | ALADULIA } <i>taken</i> |

The Memorial Lines.

Pekchín, Agrind, Chambtart, Isppers, Alépsyri, Cair E,
 Fezbarb, Daabildul, Tombneg, Monomæth-supe, Dang-
 nub,
 Chaxæth-inf, Fègran, Salvbraz, Jagóchili, Asspar,
 Quebcanaá, Philpens, Jamvirgin, Baltmary, Portno-sc.
 Astractart, Nicocyp, Mous-Bagdia, Smyrnat, Azovcirc.
 Nat-Syri-Di-Turetur, Minggeorg, Car-Amás-Nat-
 Aládnat.

TABLE IX.

*Latitude and Longitude of the most remarkable
 Places.*

To the beginning of the name of the place is added
 a *technical* ending, consisting of three or four letters,
 the two first whereof denote the latitude, the other
 the longitude: thus,

Stocklou-ak, i. e. Stockholm in the 59th degree

of latitude, and 18 of longitude; *lou* standing for 59, according to the general key, and *ak* for 18. But this is not the *exact* longitude and latitude of the place, because no minutes are taken notice of, which would perhaps be a nicety not worth remembering: but that the latitude is between 59 and 60, and the longitude between 18 and 19^r. And it is farther to be observed, that if of the two letters which signify the longitude and latitude, the first is a *consonant*, as in *lou*, in that case, though the longitude, &c. is between 59 and 60, yet it is nearer to 60 than it is to 59, and consequently 59 degrees 30 minutes at least, if not more. If the first letter is a vowel, as in *ak*, though it is between 18 and 19, yet it is nearer to the *lesser* number, and consequently 18 degrees and *under* a half; as the true longitude of Stockholm is 18 deg. 22 min. the true latitude 59 deg. 30 min.

| | Lat. | Lon. | | Lat. | Lon. |
|-------------------|------|------|--------------------|------|------|
| †BERGEN [Bersy-l] | 60 | 5 | Constantinople | } 41 | 31 |
| STOCKHOLM | } 59 | 18 | [Conob-ta] | | |
| [Stocklou-ak] | | | PRAGUE [Prag- | } 50 | 14 |
| MOSCOW [Mos- | } 55 | 38 | ly-bo] | | |
| lu-tei] | | | DANTZIC | } 54 | 18 |
| COPENHAGEN | } 55 | 12 | [Dantzuf-bei] | | |
| [Coplu-be] | | | BASIL [Básilfoi-p] | 47 | 7 |
| PARIS [Parfk-e] | 48 | 2 | BRUSSELS | } 50 | 4 |
| CRACOW [Cra- | } 50 | 20 | Brusly-o] | | |
| cúz-ez] | | | †GIBRALTAR | } 36 | 6 |
| VIENNA [Viok-ap] | 48 | 17 | [Gibtau-s] | | |
| MADRID [Ma- | } 40 | 3 | †SMYRNA [Smik- | } 38 | 29 |
| droy-t] | | | dou] | | |
| ROME [Romfá-be] | 41 | 12 | TROY [Troy-en] | 40 | 29 |

† This accuracy hath not been altogether observed in those places which have this mark (†) placed before them; the assigning to them their respective degrees of longitude and latitude being intended only to enable the learner to remember in what part of the globe they are situated.

| | Lat. | Lon. | | Lat. | Lon. |
|----------------------------|------|------|---|------|------|
| †JERUSALEM [Jeruta-ts] | 31 | 36 | †Fort St. George [Gëobí-sou] | 13 | 69 |
| ALEPPO [Alepís-tei] | 36 | 38 | †SPITSBERGEN [Spitpi-sou] | 73 | 69 |
| RHODES [Rhotoi-te] | 37 | 32 | ARCHANGEL [Archsô-fe] | 64 | 42 |
| †BABYLON [Ba- bit-fo] | 33 | 44 | BENGAL [Beng- dá-oul] | 21 | 95 |
| ATHENS [Athik-el] | 38 | 25 | VENICE [Venfl-ad] | 45 | 12 |
| IDA [Idil-doi] | 35 | 27 | CAIRO [Cairdou-il] | 29 | 35 |
| WARSAW [War- súd-eb] | 52 | 21 | LEIPS C [Leip- sb-i] | 51 | 12 |
| ALEXANDRIA [Alexib-if] | 31 | 34 | †HECLA [Hecsl-at] | 65 | 13 |
| S. HELENS [Hel- bu-p] | 15 | 7 | †NINEVEH [Ninto-fe] | 34 | 42 |
| LISBON [Listei-bz] | 38 | 10 | †PORTO BELLO [Belbá-ku] | 11 | 85 |
| NAPLES [Naplob-bu] | 41 | 15 | †PORTO RICO [Ricéz-lou] | 20 | 59 |
| MESSINA [Mes- sik-bau] | 38 | 16 | †BERMUDAS [Bermta-lou] | 31 | 59 |
| †CARTHAGE [Carthti-by] | 33 | 10 | †J-amaica [Jak-ky] | 18 | 80 |
| NANCY [Nanfei-s] | 48 | 6 | †TERCERA chief of the Azores I. [Tercerip-el] | 37 | 25 |
| †ISPAHAN [Isp- te-on] | 32 | 49 | †MADEIRA Isles [Madiit-ed] | 33 | 22 |
| AGRA [Agrék-oit] | 28 | 73 | †BARBADOES [Barbu-la] | 15 | 51 |
| SIAM [Siamaf-ga] | 14 | 100 | FERRO one of the Canary Isles [Ferrek-ak] | 28 | 18 |
| †JAPAN [Jap- to-bay] | 34 | 110 | †QUEBEC [Quop-pu] | 47 | 75 |
| †FORMOSA [Formdi-g] | 23 | 100 | | | |
| †ASTRACHAN [Astrop-lau] | 47 | 56 | | | |
| PEKIN [Pekin- oz-hap] | 40 | 117 | | | |

N. B. The first meridian is fixed at London.

It may be convenient to remember the *exact* longitude and latitude of some particular places; as,

| | Lat. deg. min. | Long. deg. min. |
|---|----------------|-----------------|
| LONDON [<i>Lónla, ib</i>] | 51 31 | 00 00 |
| FERRO Isl. [<i>Ferrép, op-ap, il</i>] | 27 47 | 17 35W |
| OXFORD [<i>Oxlá, fs-b, al</i>] | 51 46 | 01 15W |
| ROME [<i>Rómfa, lo-bé, dou</i>] | 41 51 | 12 29 E |

The Memorial Lines.

Bersy-l, Stocklou-ak, Moslu-tei, Coplu-be, Parfk-e,
 Cracúz-ez, Viok-ap, Madroy-t, Romfá-be, Conob-ta,
 Pragly-bo, Dantzuf-bei, Básiłfoi-p, Brusly-o, Gibtau-s,
 Smik-dou, Troy-en, Jeruta-ts, Alepís-tei, Rhotoi-te,
 Babit-fo,
 Athik-el, Idil-doi, Warsúd-eb, Alexib-if, Helbu-p,
 Listei-bz, Naplob-bu, Messik-bau, Carthti-by, Nanfei-s,
 Ispte-on, Agrék-oit, Siamaf-ga, Japto-bay, Formdi-g,
 Astrop-lau, Pekinoz-bap, Gëobí-sou, Spitpi-sou,
 Archsó-fe,
 Bengdá-oul, Venß-ad, Cairdou-il, Leipsub-ad, Hecsl-at,
 Ninto-fe, Belbá-ku, Ricéz-lou, Bermta-lou, Jak-ky,
 Tercerip-el, Madit-ed, Ferrek-ak, Barbu-la, Quop-pu.
Lónla, ib; Ferrép, op-ap, il; Oxla, fs-b, al; Rómfa, lo-bé, dou.

TABLE X.

Distance of chief Cities, &c. from London, in English Miles.

To the beginning of the name of the place there are two or three letters added, which are to be supplied with a cypher at the end; it being thought sufficient to give a round number, instead of being too exact, especially in a matter wherein the best geographers themselves are not agreed: as,

[*Madreis*] MADRID distant from London 86, *sc.* 860 miles. COPENHAGEN [*Copsa*] distant about 61, *sc.* 610. GENEVA [*Genevos*] distant 46, *sc.* 460 miles; and so of the rest, only PARIS [*Pardel*] 225.

Note, That the computations are made at the rate of $69\frac{1}{2}$ statute miles to a degree; which is nearest the truth, and are therefore about one part in seven more than in Mr. Templeman's tables, who computes by geometrical miles of 60 to a degree.

DISTANCES FROM LONDON.

| | Eng. miles. | | Eng. miles. |
|--------------------|-------------|---------------------|-------------|
| PARIS [Pardel] | 225 | PRAGUE [Praul] | 650 |
| R-ome [Roul] | 950 | GIBRALTAR [Gibrabs] | 1160 |
| MADRID [Madreis] | 860 | WARSAW [Warsnu] | 950 |
| VIENNA [Vienke] | 820 | STOCKHOLM [Stoup] | 970 |
| COPENHAGEN [Copsa] | 610 | DANTZIC [Dantziky] | 800 |
| GENEVA [Genevos] | 460 | CONSTANTINOPLE | } 1600 |
| MOSCOW [Moscass] | 1660 | [Constasg] | |

DISTANCES FROM JERUSALEM.

| | | | |
|---------------------------------------|-----|------------------------|-------|
| BABYLON [Baboky] | 480 | DAMASCUS [Dam- buz] | } 150 |
| NAZARETH [Nazky] | 80 | | |
| SAMARIA [Samol] | 45 | ANTIOCH [Antig] | 300 |
| From DAN to BEERSHEBA [Dan-a-béerdoz] | | | 240 |

The Memorial Lines.

Pardel, Roul, Madreis, Vienke, Copsa, Genevos,
Moscass, Praul, Gibrabs, Warsnu, Stoup, Dantziky,
Constasg.

Baboky, Nazky, Samol, Dambuz, Antig + Dan-a-béerdoz.

TABLE XI.

The Proportion of the Countries of Europe to Great Britain, that Island being the Unit.

| | | | |
|-------------------------|----------|-----------------------------|-------|
| RUSSIA [Russ- az-bi] | } 10, 13 | POLAND [Polt,in] | 3, 39 |
| GERMANY | | TURKEY [Turt,ak] | 3, 18 |
| [Germt,ut] | } 3, 53 | SPAIN [Spa,ka] | 1, 81 |
| SWEDEN [Swi,ss] | | FRANCE [Fra,p] | 1, 7 |
| | 3, 66 | ^s ITALY [Itb-dn] | 1, 19 |

^s With Sicily, Corsica, and Sardinia.

| | | | | | |
|--------------------------------|---|------|-----------------------------|------|-----|
| ^t DENMARK | } | 1,49 | United Provin- | } | ,11 |
| [Dénmab,on] | | | ces ^u [Un-pr,ab] | | |
| Portugal [Por,ts] | | ,36 | SWITZERLAND ^u | } | ,17 |
| SPANISH N-ether- | } | ,18 | [Switzer,boi] | | |
| lands ^u [Span-n,ak] | | | Britain | 1,00 | |

The Memorial Lines.

Russaz-bi, Germt,ut, Swi,ss, Polt,in, Fra,p, Spa,ka,
Turt,ak,
Por,ts, Span-n,ak, Un-pr,ab, Switzer,boi, Dén-mab,on,
Itb,an.

EXPLANATION.

[Gert,ut] Germany is to Great Britain as 3,53 to 1, i. e. three times as big, and a little above half as big. United Provinces [Un-pr,ab] as ,11 or very little above a tenth part; and so of the rest.

Note, That a degree is esteemed equal to 60 GEOMETRICAL miles, 69½ English statute miles, 15 GERMAN miles, 25 common French leagues, 480 GREEK STADIA, 16 PERSIAN PARASANGS, 12 (or according to some 8) ÆGYPTIAN SCHŒNI.

Deg = Geömauz = Gerbu = Frel = Stadoky = Perspara-báu = Schad.

TABLE XII.

Situation of Islands.

1. EUROPEAN ISLANDS.

| | | | |
|-----------------------|---|---------------------------------|-----------------------|
| In the Northern Ocean | { | ICELAND west of Norway [Icenor] | |
| | { | Britain and Ireland. | |
| In the Baltic | { | ZEALAND | { E. of Jutland [Fun- |
| | { | FUNEN | } Zealjut] |
| In the Mediterranean | { | MINORCA | { East of |
| | { | MAJORCA | } Valencia |
| | { | Y-vica | } [MiMajorc Yvalenci] |

^t Including Norway and Iceland.

^u Now in possession of France.

| | | | | |
|-------------------------|---|------------------------------------|---|---------------------------|
| In the Mediterranean | { | CORSICA | } | S. of Genoa [CoSardgen] |
| | | SARDINIA | | |
| | | SICILY south of Naples [Sicina] | | |
| | | CANDIA south of the | } | [Cand- archpel] |
| | | lago | | |
| | | CORFU west of Butrinto [Corfbut] | | |
| | | CEPHALONIA W. | } | [Cepha- Zant- Cemo] |
| | | ZANTE W. | | |
| CERIGO S. | | | | |
| | | NEGROPONT east of Livadia [Negliv] | | |

The Memorial Lines.

Icenor, FunZealjut, MiMajorcYvalenci, CoSardgen,
Sicina, Candarchpel, Corfbut, CephaZantCemo, Negliv.

II. ASIATIC ISLANDS.

| | | | | |
|-----------------------------|---|------------------------------------|-----------------------|--|
| In the Eastern Ocean. | { | JAPAN E. of North China | [JadnorCh] | |
| | | FORMOSA E. of South China | [FormósouChin] | |
| | | PHILIPPINE Isl. E. of the | { [PhilipEast Pen] | |
| | | Eastern Peninsula | | |
| | | LADRONE Isl. E. of the Philippines | [Ladphi] | |
| | | MOLUCCA Isl. E. of the | { [MolúcPEast] | |
| Eastern P-eninsula | | | | |
| | { | Isles of the SOUND S.E. of | { [Sound- PEast] | |
| | | the Eastern P-eninsula | | |
| | | MALDIVES S. | { of the Western | { [Mal-Céy- PWest] |
| | | CEYLON E. | | |
| | | In the Mediterranean | { | RHODES |
| CYPRU | | | | |
| In the Archipe- lago | { | STALIMENE | } | W. of Nato- lia N. to S. } [StalMeSci- Sámnat] |
| | | METELIN | | |
| | | SCIO | | |
| | | SAMOS | | |

The chief of the MOLUCCA Isles are CELEBES or Macassar, GILOLO, CERAM, AMBOYNA.

The chief of the PHILIPPINES are MANILLA and MIN-danao.

Isles of the SOUND, the chief are SUMATRA, BORNEO, and JAVA.

The Memorial Lines.

JapnorCh, FormósouChin, PhilipEastPen, Ladphi,
MolúcPEast,

SoundPEast, MalCéyPWest, Rhod-Cypnato, StálMe-
SciSámnat.

MOL=Cele-GilCér-Amb. PHIL=ManMind. SOUND
=Suma-BornJav.

III. AFRICAN ISLANDS.

| | | | | |
|---------|---|---------------------------------------|---|---------------|
| In the | { | MADAGASCAR or the Isle | { | [Madgasczang] |
| Æthio- | | of St. Laurence, E. of the | | |
| pic O- | | south part of Zanguebar | | |
| cean | { | Zocotra, at the east end | { | [Zocajan] |
| | | of the coast of <i>Ajan</i> | | |
| | | St. HELENS west of Congo | | |
| In the | { | Isles of Cape VERD, W. of | { | [Verdne] |
| Atlan- | | Negroland | | |
| tic O- | | CANARY Isles W. of <i>Bildulgerid</i> | | |
| cean | { | MADEIRA Isles W. of <i>Barbary</i> | { | [Madéirbarb] |
| | | AZORE Isles W. of <i>Portugal</i> | | |
| In the | { | MALTA S. of Sicily | { | [Maltsic] |
| Medit- | | PHAROS at the mouth of | | |
| eranean | | the port to <i>Alexandria</i> | | |

The chief of the CANARY Isles are FERRO or Hiero,
TENERIFFE, CANARY.

The chief of the AZORES, TERCERA.

The chief of the MADEIRA Isles, PORTO SANTO and
MADEIRA.

The Memorial Lines.

Madgasczang, Zocajan, HelCongo, Verdne, Canárbild,
Madéirbarb, Azport——Maltsic, Pharalexan.

CAN=FerHi-TeneCan; Az=Terce; MADEIRA=Po-
SanMad.

IV. AMERICAN ISLANDS.

NEWFOUNDLAND east of Nova Scotia [NewfnovScot]
CALIFORNIA west of New Granada [Caligran]

CARIBBEE Isles east of the *Antilles* [Caribant]
 LUCAYOS Isles east of *Florida* [LuF]
 BERMUDAS or Sommers' Isles east of } [Bermcar]
Carolina
 ANTILLES Isles south of *Lucayos* Isles [Antílluc]

The chief of the LUCAYOS Islands are BAHAMA, LUCAYONE, PROVIDENCE.

The chief of the CARIBBEE Islands are BARBADOES and the Leeward Isles, viz. St. CHRISTOPHER'S, ANTIGUA, TOBAGO, &c.

The chief of the ANTILLES Islands are CUBA, JAMAICA, HISPANIOLA, PORTO RICO.

The Memorial Lines.

NEWfnovScot, Caligran, Caribant, LuF, Bermcar, Antílluc.

LUC=Ba-Lu-Prov; Cari=Barb, Chr-Ant-Tob; Antíll=Cu-Jam-Hisp-Ric.

TABLE XIII.

The most remarkable of the lesser British Isles.

ORKNEY } North of Scotland [Ork-shetno-sc]
 SHETLAND }
 HOLY Island east of *Northumberland* [Holynorth]
 CANVEY Isl. } near the mouth } Essex [Canvess]
 SHEPPEY Isl. } } of the Thames } Kent [Shep-
 THANET } } in } thanken]
 ANGLESEY west of *Caernarvonshire* [Angcaern]
 MAN west of *Lancashire* [Manlan]
 RAMSEY over against St. David's } [Ramdavi-pem]
 Point in *Pembrokeshire* }
 WIGHT (Vectis) S. of *Hampshire* [VecS-ham]
 GUERNSEY } on the Coast of } [Guer-jerco-nor]
 JERSEY } Normandy }
 WESTERN Isl. (Ebudæ) West of Scotland [Ebwe-sc]

The Memorial Lines.

Ork-shetno-sc. Holynorth, Canvess, Shep-thanken, &
 Angcaern,
 Manlan, Ramdavi-pem, VecS-ham, Guer-jerco-nor,
 Ebwe-sc.

TABLE XIV.

Ancient Europe, Asia, and Africa.

I. Ancient EUROPE, by way of accommodation to the present divisions of it, may be divided into,

1. *Northern*; containing SCANDINAVIA, FENINGIA, part of SARMATIA, CIMBRICA Chersonesus, CODANONIA Insula.

2. *Middle*; containing GERMANIA, the rest of SARMATIA, GALLIA Transalpina or Celtogalatia, RHÆTIA, Vindelicia, NORICUM, part of PANNONIA, DACIA.

3. *Southern*; containing IBERIA, ITALIA, the rest of PANNONIA, ILLYRICUM, MÆSIA, GERÆCIA, THRACIA.

EUR=Sca-Fe, Sarm, Cimb-Cod; Ger-S, G-Rhœ-V-No-Pa-D; Ib-Ita-Pill-MœG-Th.

II. ASIA Antiqua may be divided into,

1. *Northern*; containing SCYTHIA Asiatica, Sogdiana; COLCHIS, IBERIA, ALBANIA.

2. *Middle*; containing ASIA M-inor, ARMENIA; SYRIA, MESOPOTAMIA, ASSYRIA, MEDIA, HYRCANIA, BACTRIANA, ARACHOSIA; BABYLONIA, SUSIANA, PARTHIA, ARIA, DRANGIANA; PERSIS, CARAMANIA, GEDROSIA. N-orth part of INDIA, SERICA, SINÆ.

3. *Southern*; containing ARABIA, the two P-eninsulas of INDIA.

AS=ScythiSogd, Col-Ib-Alb; Asm-Arm, Sy-Mes-Ass-Med-Hy-BactArch,

Bab-Sus-Parth-AriDran, Pers-Car -Gedro; N.Ind-Se Sin; Ar -P-Ind.

III. AFRICA was anciently divided into,

1. *Northern*; containing MAURITANIA, T-INGITANIA, and CÆSARIENSIS, NUMIDIA, AFRICA *Propria*, LIBYA, (comprehending CYRENAICA and MARMARICA) E-GYPT; GÆTULI, GARAIMANTES, NASAMONES, PSYLLI.

2. *Middle*; containing LIBYA *DESERTA* or *interior*, comprehending the ATLANTES, PHAURUSII, NIGRITÆ, NUBIA, ÆTHIOPIA.

3. *Southern*; containing the LEUCÆTHIOPEs, EREMBI or TROGLODYTÆ, BLEMMYES.

AF = MauT - Cæs - Numid - Afp - Liby - (Cyr - Mar) - E;
GætGara - NasPsyl;

Libydes = AtlántPhauNig - Nub - Æth; Léucæth - EremBlem.

TABLE XV.

*Ancient Italy and Greece, Asia Minor, Syria,
and Palestine.*

1. Ancient ITALY may be distinguished into two general parts; Gallia Cisalpina to the north, and Italy, primarily so called, to the south.

The several people of Gallia Cisalpina were these:

* LIGURES, TAURINI, SEGUSIANI, SALASSI, LEPONTII, EUGANEI, RHÆTI, CARNI, ISTRI, VENETI: (south of the P-o these) A-nanes, BOII, LINGONES, SENONES; (north of the Po these) LIBICI, LÆVI, INSUBRES, OROBII, CENOMANI.

Italia, primarily so called, or the south parts of Old Italy, comprehending these following countries and people:

† ETRURIA or TYRRHENIA, SABINI, LATIUM, CAMPANIA, PICENTINI, GRÆCIA magna; ‡ UMBRIA, PICE-

* Lying in order along the Alps.

† Lying in order on the Mare Inferum.

‡ Lying in order on the Mare Superum.

num, V-estini, Marucici, Frentani, Apulia; ^aMAR-si, PELigni, SAMnium, HIRPini.

CIS=Lig-Tau-Sé-Sa-Lep-Eug-Rhæt-Car-Is, Vén (P)
A-Bo-Ling-Sen.

Lib-Læv-Ins-Oro-Cen —————

IT = Etru-Sab-Lá-Ca-Pi-G, Um-Pí-V-Ma-Fr-Ap
Mars-PeliSamn-Hirp.

II. Ancient GREECE was usually divided into five general parts, viz. Macedonia, THESSALIA, EPIRUS, HELLAS or GRÆCIA properly so called, and PELOPONNESUS.

GRÆ=MáTh, Epir-HelPel ———

1. PELOPONNESUS was divided into six parts or regions, viz. ^bACHAIA, ELIS, MESSENIA, LACONIA, ARGIA or ARGOLIS, ^cARCADIA.

—— PELOP=Ach-Eli-Méss-Lac-Ar-Arcad.

2. EPIRUS contained these people and countries, viz. CHAONES, DRYOPES, THESPROTII, CASSIOPÆI, AMPHILOCHI, ALMENE, MOLOSSI, ACARNANIA.

EP=Chao-Dry, Thesprot-Cass-Amphiloc, Al-Mol
Acarnan.

3. HELLAS, or GRÆCIA PROPRIA, (called also Achaia,) was divided into eight parts, viz. DORIS, LOCRISEPICNEMIDIA, ÆTOLIA, LOCRISE-OZOLÆA; PHOCIS, BÆOTIA, MEGARIS, ATTICA.

GRÆ-PROPRI = Dó-Locep, Æto-Lochróz,-Pho,-Bæ-
Meg-Att.

4. THESSALIA contained these several parts, viz. PELASGIOTIS, ESTIOTIS, THESSALIOTIS, PHTHIOTIS, M-agnesia.

THESS=PelasEstThéss-Phthi-M ———

^a In the inland parts.

^b Lying in order on the Ionian, Ægean, and Cretan sea.

^c In the inland.

5. Some of the more remarkable people and countries of MACEDONIA were, TAULANTIÏ, PÆONES, MYG-
DONIA, ÆMATHIA, AMPHAXITIS, PIERIA.

—MACE=Taul-Pæo-Mygd-Æmath-AmphPi.

ASIA *m-inor* comprehended ASIA *p-ropria*, BITHY-
NIA, PONTUS, GALATIA, ^dCAPPADOCIA:—LYCIA, PAM-
PHYLIA, CILICIA.

Asm = Asp-Bith-Pó-Ga-Capp: Lyci-Pamphy-Cil —

ASIA *p-ropria* contained PHRYGIA *min-or*, MYSIA
mi-nor, MYSIA *m-ajor*, ÆOLIS, IONIA, LYDIA, PHRYGIA
ma-jor, CARIA, DORIS.

Asp=Phrygimin-MysimiM, Æol Ioni-Lyd-PHYMA,
CarDo.

GALATIA comprehended PONTUS GALATICUS, PAPHLA-
GONIA, GALATIA *p-ropria*, ISauria, and part of PISIDIA;
the other part of which, with the regions of CARBALIA,
was contained in PAMPHYLIA.

—Gal=PongalaPaphGalap Is-pis.

SYRIA was divided into four parts: SYRIA *p-ropria*,
PHÆNICIA, CÆLOSYPRIA, PALESTINA.

PALESTINE was distinguished into GALILÆA, SA-
MARIA, JUDÆA, PERÆA or Judæa beyond JORDAN,
IDUMÆA.

SYR = SyrpPhœn-Cœlo-Pal. PAL = GálSamaJudæ-
Per Idum.

TABLE XVI.

Ancient Gallia, Germania, Iberia, Britannia.

1. GALLIA was divided by Augustus into four parts
or provinces, viz. Gallia BELGICA, Gallia CELTICA,

^d Among the several regions of Cappadocia was LYCAONIA.

or Lugdunensis, Gallia Aquitana, and Gallia Narbonensis. [Gall=BelCeltAquiNarb.]

2. The inhabitants of ancient Germany were comprehended under four general denominations, viz. Ingævones, Vandali, Istævones, Hermiones.

[GERM=Ing-Vand Ist-Her.]

3. IBERIA, or ancient Spain, was distinguished into three general parts, viz. Tarraconensis, Lusitana, Bætica [IBERI=TarLuB.]

4. BRITANNIA, according to the last division by the Romans, was distinguished into five parts, viz. Valentia, Maxima Cæsariensis, Britannia secunda, Flavia Cæsariensis, Britannia prima, [BRIT=Val. Max, Britse-Fla, Britprim.]

GALL = BelCeltAquiNarb.

GERM = Ing-Vand

Ist-Her. I = TarLuB.

—————BRIT=ValMax, Britse-Fla, Britprim.

The Memorial Lines for all the ancient Geography.

EUR=Sca-Fe, Sarm, Cimb-Cod; Ger-S, G-Rhœ-V-No-Pa-D; Ib-Ita-Pill-MœG-Th.

AS=ScythiSogd, Col-Ib-Alb; Asm-Arm, Sy-Mes-Ass-Med-Hy-BactArch,

Bab-Sus-Parth-AriDran, Pers-Car -Gedro; N.Ind-Se Sin; Ar -P-Ind.

AF = Mau T -Cæs- Numid -Afp-Liby-(Cyr - Mar)-E; GætGara-NasPysl;

Libydes = AtlántPhauNig- Nub -Æth; Léucæth-EremBlem.

CIS=Lig-Tau-Sé-Sa-Lep-Eug-Rhæt-Car-Is, Vén (P) A-Bo-Ling-Sen.

Lib-Læv-Ins-Oro-Cen —————

IT = Etru - Sah - Lá-Ca-Pi-G, Um-Pí-V-Ma-Fr-Ap Mars-PeliSamn-Hirp.

GRÆ = MáTh, Epir-HelPel. PELOP = Ach-Eli-Mess-Lac-Ar-Arcad.

EP=Chao-Dry, Thesprot-Cass-Amphiloc, Al-Mol Acarnan.

GRÆ-PROPRI = Dó-Locep, Æto-Lochróz, -Pho, -Bœ-
Meg-Att.

THESS = PelasEstThéss-Phthi-M. MACE = Taul-Pæo-
Mygd-Æmath-AmphPi.

Asm = Asp-Bith-Pó-Ga-Capp: Lyci-Pamphy-Cil —
Asp = Phrygimin-MysimiM, Æol Ioni-Lyd-Phryma,
CarDo.

————Gal = PongalaPaphGalap Is-pis.

SYR = SyrpPhœn-Cœlo-Pal. PAL = GálSamaJudæ-
Per Idum.

GALL = BelCeltAquiNarb. GERM = Ing-Vand Ist-
Her. I = TarLuB.

————BRIT = ValMax, Britse-Fla, Britprim.

TABLE XVII.

Remarkable Places in ancient Geography.

| | |
|----------------------------------|------------------------------|
| ABDERA in <i>Thracia</i> | THESSALONICA in <i>Am-</i> |
| BERYTUS in <i>Phœnicia</i> | <i>phaxitis</i> |
| HELICON in <i>Phocis</i> | NICOMEDIA in <i>Bithynia</i> |
| HALICARNASSUS in <i>Doris</i> | NYSSA in <i>Megaris</i> |
| in <i>A-sia minor</i> | ACROCERAUNIA mountain in |
| CHERONÆA in <i>Bœotia</i> | <i>Epirus</i> |
| CANNÆ in <i>Peucetia</i> | CITHÆRON m. in <i>Bœotia</i> |
| ARBELA <i>Assyria</i> | HYMETTUS m. in <i>Attica</i> |
| GRANICUS river of <i>Phrygia</i> | ATHOS m. in <i>Macedonia</i> |
| MÆANDER river of <i>Lydia</i> | OLYMPUS } mountains in |
| TAGUS river of <i>Lusitania</i> | PELION } <i>Thessalia</i> |
| ISSUS promont. of <i>Cilicia</i> | OSSA } |
| PATMOS one of the <i>Spo-</i> | MANTINEA in <i>Arcadia</i> |
| <i>rades Islands</i> | EPIDAUROS in <i>Laconia</i> |
| OLYMPIA in <i>Elis</i> | PELLA in <i>Æmathia</i> |
| PYLUS in <i>Messene</i> | ACTIUM } in <i>Acarmania</i> |
| MARATHON in <i>Attica</i> | AMBRACIA } |
| DELPHOS in <i>Phocis</i> | SMYRNA } in <i>Ionia</i> |
| SAMOSATA in <i>Comagene</i> | EPHESUS } |
| DYRRACHIUM in <i>Macedo-</i> | PERGAMUS in <i>Mysia</i> |
| <i>nia</i> | LAODICEA in <i>Caria</i> . |

| | | | |
|--------------|------------------------|-----------------|---------------------------------|
| SARDIS | | CORINTH | |
| THYATIRA | } in <i>Lydia</i> | CENCHRÆÆ | } in <i>Achaia</i> |
| PHILADELPHIA | | ELEUSIS | |
| SARDICA | | | in <i>Megaris</i> |
| CHALCEDON | | ACERRÆ | in <i>Campania</i> |
| CIRTUM | in <i>Bithynia</i> | CHALCIS | in <i>Ætolia</i> |
| ILLIBERIS | in <i>Hisp. Bætica</i> | CORFINIUM | } of the <i>Pe-</i> |
| ANCYRA | in <i>Galatia</i> | SULMO | |
| GANGRA | in <i>Paphlagonia</i> | | ligni |
| SIRMIUM | in <i>Pannonia</i> | MEMPHIS | in <i>Inferior E-gypt</i> |
| NEOCÆSAREA | in <i>Cappadocia</i> | THEBAIS | in <i>Super. E-gypt</i> |
| PHARSALIA | in <i>Thessalia</i> | MYCENÆ | in <i>Argia</i> |
| *PHILIPPI | in <i>Thracia</i> | PATARA | in <i>Lycia</i> |
| LEUCTRA | in <i>Bœotia</i> | CHALYBES | a people of |
| CLUSIUM | in <i>Etruria</i> | | <i>Galatia</i> |
| BAIÆ | in <i>Campania</i> | NEMEA | in <i>Argia</i> |
| TUSCULUM | in <i>Latium</i> | ADRAMYTTIUM | in <i>Mysia</i> |
| AQUILEIA | of the <i>Carni</i> | CNIDUS | in <i>Doris</i> in <i>A-sia</i> |
| EDESSA | in <i>Mesopotamia</i> | MEDIOLANUM | of the <i>In-</i> |
| RHEGIUM | in <i>Calabria</i> | | subres |
| TOMI | in <i>Mœsia</i> | SYRACUSÆ | in <i>Sicily</i> |
| DAMASCUS | in <i>Cælo-S-ryia</i> | PATAVIA | of the <i>Veneti</i> |
| COLOSSÆ | in <i>Phrygia</i> | ILLIUM | in <i>Phrygia</i> minor |
| SAGUNTUM | in <i>Hispania</i> | CARBALIA | in <i>Pamphylia</i> |
| | <i>Tarraconensis</i> | LYCAONIA | in <i>Cappadocia</i> |
| BRUNDISIUM | in <i>Calabria</i> | CYZICUM | in <i>Mysia</i> |
| COMAGENE | a region of | CUMA | in <i>Æolis</i> |
| | <i>S-ryia propria</i> | PISIDIA | part in <i>Pamphylia</i> , |
| DODONE | a town of the | | part in <i>G-alatia</i> |
| | <i>Molossi</i> | CURES | of the <i>Sabini</i> |
| SPARTA | in <i>Laconia</i> | LAVINIUM | in <i>Latium</i> |
| ANTIOCHIA | in <i>Pisidia</i> | ARDEA | of the <i>Rutuli</i> |
| ANTIUM | of the <i>Volsci</i> | PORTUS LIBURNUS | in <i>Etru-</i> |
| AMYCLÆ | in <i>Laconia</i> | | <i>ria</i> |
| ARIMINUM | in <i>Umbria</i> | TEGÆA | in <i>Arcadia</i> |
| | | LUCANI | } in <i>Oenotria</i> |
| | | BRUTII | |
| | | OENOTRIA | part of <i>Græcia</i> |
| | | M-agna | |

* Why Philippi is said to be in Macedonia, Acts xvi. 12. see Wells's Geography, chap. 15, and Pearce on the Epistles.

| | | |
|-------------------------|-------------------------|---------------|
| MESSAPIA part of Græcia | SABÆI | } in Arabia |
| M-agna | SARACEN | } Felix |
| DAUNIA } parts of Apu- | NABATHÆI in Arabia | Pe- |
| PEUCETIA } lia | træa | |
| ÆQUI } in Latium no- | NOMADES } in Arabia | |
| HERNI } vum | SCENITÆ } Deserta | |
| MUTINA of the Boii | TYRUS | } in Phœnicia |
| RAVENNA in Umbria | SIDON | } |
| CALABRI } | HIPPO in Numidia | |
| SALENTINI } in Messapia | PALMYRA in Cælo-S-ryria | |
| VOLSCI } | NOLA in Campania | |
| AUSONES } N-ovum | TARENTUM of the Salen- | |
| | tini | |

The Memorial Lines.

Abderthra, Beryphæn, Helicoph, Halicárdor-A, Cherbæ,
 Canpeucet, Arbass, Granph, Mælydi, Táglusit, Iscil,
 Patsporad, Olymelis, Pylmes, Marathattica, Delpho,
 Samósacom, Dyrrmac, Thessalámphax, Nicbithy, Nyss-
 meg,

Acrócepir, Cithbæ, Hymat, Athmac, Ol-pel-Othessal,
 Mantarc, Epidaulac, Pellæmath, Act-amacarnan,
 Smyrn-ephion, Pergmys, Laodcar, Sard-thya-phillyd,
 Sardthraci, ChalB, Cirtnum, Ilibhisp-bæt, Anecala,
 Gangpaph,

Sirmpan, Neocæscap, Pharsthesa, Philipthraci, Leucbæ,
 Clusetru, Baicampa, Tusclat, Aquileicar, Edessmes,
 Rhegcalabré, Tomæes, Damcæl-S, Colóssphrygi, Sugtar,
 Brundcala, ComS, Dodmol, Spartlac, Antôchpisid,
 Antvols,

Amyclac, Arimumb, Cori-cenchrach, Eleusmeg, Acerr-
 camp,

Chalcæt, Corfinipel, Sulmpel, MemphinferE, ThebsúpE,
 Mycenarg, Putalyc, Chalygal, Nemarg, Adramytmys,
 CnidorA, Mediolins, Syracusici, Patvenet, Ilphryn,
 Carbálipamph, Lycacap, Cyzimys, Cumæoli, Pispam G.
 Cursab, Lavinilat, Ardrut, Liburnetru, Tegarc,
 Luc-Brutoenot, OenogræM, MessapgræM, Dauni-
 Peucétap,

Æqu-hernlatN, Mutiboi, Ravnumb, Cala-Salme, Vol-AuslatN.

Sab-Sáracenára-fel, Nabathpet, Nom-Scenarab-des.

Tyr-Sidphœn, Hipponum, PalmCœlS, Nolcampa, Tarentsal.

TABLE XVIII.

The correspondence of ancient and present Geography.

REGIONS AND PROVINCES.

| Ancient. | Present. | Ancient. | Present. |
|------------------|---------------|------------|---------------|
| SARMATIA | Poland | DACIA | Moldavia |
| [Sarmpona-rusL-] | Great Tartary | | Walachia |
| | South part of | | Transilva. |
| | Russia | LIBURNIA | Croatia |
| | L-ivonia | ILLYRICUM | Croatia |
| CIMBRICA | | | Dalmatia |
| Chersonesus | Jutland | NORICUM | Bavaria |
| Insula CODANONIA | Zealand | VINDILICIA | Austria |
| | | | Suabia |
| SCANDINAVIA | Norway | | Bavaria |
| or B-altia | and part of | RHÆTIA | Grisons |
| | Sweden | | Tyrol and |
| SCYTHIA As. | Great | | part of Italy |
| and SOGDIANA | T-artary | HELVETII | Switzerland |
| ACHAIA or HELLAS | Livadia | ALLOBROGES | Savoy |
| EPIRUS | Chimæra | COLCHIS | Mingrelia |
| THESSALY | Janna | IBERIA | Georgia |
| MÆSIA superior | Servia | ALBANIA | |
| MÆSIA inferior | Bulgaria | GÆTULIA | Bildulgerid |
| PELOPONNESUS | Morea | AFRICA | Tripoli and |
| THRACIA | Romania | propria | |
| PANNONIA | Hungary | MAURITANIA | Tunis |
| | | | Fez and |
| | | | Morocco |

^f Zealand, Funen, and the adjoining isles had the common name of *Insulæ Æmodes*, and were esteemed isles of ancient Germany, being inhabited by the Teutoni, called also Codani.

| Ancient. | Present. | Ancient. | Present. |
|--------------------|---|--------------|-------------------------------------|
| LIBYA pr. | <i>Barca</i> | NUMIDIA nova | <i>Bildulgerid</i> |
| NUMIDIA | <i>Algiers</i> | SOGDiana | { <i>Zagatay</i> or <i>Usbec</i> |
| LIBYA DE- serta | { <i>Zaara</i> | IBERIA | <i>Spain</i> |
| NIGRITÆ | <i>Negroland</i> | CANTABRIA | <i>Biscay</i> |
| TAURICA | { <i>The peninsu-</i> | ALBION | <i>Britain</i> |
| CHERSO- nesus | { <i>la of little</i> <i>Tartary</i> | LIGURES | <i>Genoa</i> |
| GARA- mantes | { <i>The Deserts</i> <i>of Zaara</i> | ARMENIA maj. | <i>Turcomania</i> |
| | | ARMENIA min. | <i>Aladulia</i> |
| | | MESOPOTAMIA | <i>Diarbec</i> |

The Memorial Lines.

Sarm-po-ta-rus L, *Cimbjut*, *Codanzeal*, *Sca-Bswe-no*,
Scyth-sog-T,
Achlivad, *Epichim*, *Thessjan*, *Mœssér-B*, *Pelomor*,
Throm,
Panhung, *Dacimol-wa-T*, *Liburcro*, *Illyricro-dal*,
Norbavar-aus, *Vindsua-B*, *Rhætgrís-tyr-it*, *Helvswit*,
Allóbsav,
Colchming, *Iber-albgeor*, *Gætulbild*, *Africatrip-tun*,
Maufez-mor, *Libybarc*, *Numidalg*, *Lib-deszara*, *Nigneg*,
Taur-cherstart, *Garazaar*, *Numi-novbil*, *Sogdzagat*,
IbSpain,
Cantabis & Albbrit, *Ligugen*, *Armturc-ala*, *Mespdì*.

TABLE XIX.

Seas, Straits, Gulfs, Islands, Rivers, Towns.

| Ancient. | Present. |
|------------------------------|--|
| Mare Hyrcanum, or CASPIUM | { <i>Sea of Sala</i> or <i>Backu</i> |
| PONTUS EUXINUS | <i>Black</i> or <i>Euxine</i> <i>Sea</i> |
| ÆGÆAN SEA | <i>Archipelago</i> |
| PROPONTIS | <i>Sea of Marmora</i> |
| PALUS MÆOTIS | <i>Sea of Azov</i> |
| FRETUM GADITANUM | <i>Strait of Gibraltar</i> |
| BOSPHORUS CIMMERIUS | <i>Strait of Caffa</i> |
| BOSPHORUS THRACICUS | <i>Strait of Constantinople</i> |

| Ancient. | Present. |
|--------------------|---------------------------------|
| HELLESPONTUS | Strait of the <i>Dardanells</i> |
| SINUS ADRIATICUS | Gulf of <i>Venice</i> |
| SINUS SALAMINIUS | Gulf of <i>Engia</i> |
| SINUS GANGETICUS | Bay of <i>Bengal</i> |
| SINUS PERSICUS | Gulf of <i>Balsora</i> |
| SINUS CORINTHIACUS | Gulf of <i>Lepanto</i> |
| SINUS ARABICUS | <i>Red Sea</i> |
| FRETUM SICULUM | Straits of <i>Messina</i> |
| SINUS AMFRACIUS | Gulf of <i>Larta</i> |
| MARE LIGUSTICUM | Sea of <i>Genoa</i> |
| SINUS MAGNUS | Bay of <i>Siam</i> |
| MARE TYRRHENUM | Sea of <i>Tuscany</i> |

Islands, Rivers, and Towns.

| Ancient. | Present. | Ancient. | Present. |
|--------------|--------------------------------|-------------|------------------|
| THULE | <i>Iceland</i> | PATMOS | <i>Palmosa</i> |
| EBUSUS | <i>Yvica</i> | DIOSCORIDES | <i>Zocotra</i> |
| BALEARES | { <i>Majorca</i> | LEMNOS | <i>Stalimene</i> |
| | { <i>Minorca</i> | GADES | <i>Cadiz</i> |
| Ins. ÆOLIÆ | <i>Lipari Isles</i> | CYRNUM | <i>Corsica</i> |
| I. FORTUNATÆ | <i>Canaries</i> | SALAMIS | <i>Coluri</i> |
| § HESPERIDES | <i>C. Verd</i> | CARPATHUS | <i>Scarpanto</i> |
| TAPROBANA | <i>Ceylon</i> | TRINACRIA | <i>Sicily</i> |
| COS | <i>Lango</i> | CYTHERON | <i>Cerigo</i> |
| CRETE | <i>Candy</i> | M. ÆTNA | <i>Gibel</i> |
| CASSITERIDES | <i>Scilly Isles</i> | M. VESUVIUS | <i>Soma</i> |
| EUBŒA vel | { <i>Negropont.</i> | LACUS TRA- | { <i>Lake of</i> |
| CHALCIS | | simenus | |
| ITHACA | <i>Iledi Compare</i> | RUBICON | <i>Fiumecino</i> |
| ÆGINA | <i>Engia</i> | PADUS or | { <i>Po</i> |
| CERNE | ^h <i>Madagascar</i> | ERIDANUS | |
| LEUCAS | <i>St. Maura</i> | | |
| LESBUS | <i>Metelin</i> | ISTER | <i>Danube</i> |

§ Called also Gorgades.

^h Madagascar is supposed by some to be the Menuthias of the ancients.

| Ancient. | Present. | Ancient. | Present. |
|-------------------------|---------------------|------------------------|-----------|
| BÆTIS | } Guadal- quiver | ROTHOMAGIA | Rouen |
| TANAIS | | TIGURUM | Zurich |
| RHA | Don | SAGUNTUM | Morvedro |
| BORYSTHENES | Volga | CALPE | Gibraltar |
| | Nieper | COLONIA A- GRIPPINÆ | } Cologne |
| ARGENTORA- tum | } Strasburg | LUGDUNUM | |
| MOGUNTIIUM | | LUGDUNUM | } Lyons |
| COLONIA AL- LOBROGUM | Mentz | B-ATAVORUM | |
| | } Geneva | | } Leyden |
| | | | |

The Memorial Lines.

Caspsala-back, Euxblack, Ægarch, Propmármo, Mæot-
zov,

Fret-gádigib, Cimmcaff, Thraciconst, Hellespdar,
Adrateen,

Sin-salameng, Ganbeng, Persbals, Si-corinthiep, Árāb-
red-S,

Fret-sicumess, Amblart, Ligugen, Sin-magsia, Tyrrtusc.

Thulice, Ebûsyv, Balema-M, Æolípári Fortcan,
Hespverd, Taprobceyl, Coslang, Cretcandy, Cassitscill,
Chalc-eubneg, Ithacomp, Ægineng, Cernmada, Leuc-
maur,

Lesbmetelin, Patpalm, Dioscórzoc, Lemstali, Gadcad,
Cyrncorsic, Salacol, Carpscarp, Trinacsici, Cythcer,
Ætnagi, Vesuvsom, Trasiper, Rubifium, Pad-Eridpo,
Istdanu, Bætguadal, Tanadon, Rhavolga, Borystniep.

Argentstras, Mogmentz, Col-allgen, Róthoro, Tigzur,
Sagmorved, Calpgib, Col-agripcol, Luglyo, Lug-BLeyd.

N. B. It was thought needless to give more exam-
ples, especially of such as now have any likeness or
affinity in their ancient names; as *Tagus* Taio, *Sequa-*
nus Seyne, *Rhenus* Rhine, *Garumna* Garonne, *Zacyn-*
thus Zante, *Melita* Malta, &c.

GEOGRAPHIA SACRA.

TABLE XX.

The Plantation of the Earth after the Flood.

And first, the several countries mentioned in holy Scripture, and denominated from some of the posterity of SHEM, viz.

OPHIR, conjectured to be part of the East Indies, viz. Aurea Chersonesus of the ancients [Ophchers]

HAVILAH, part of Susiana and Caramania [Havisus-car.]

ELAM, part of Susiana and Persis [Elasus-pers.]

ASSHUR, or Assyria properly so called, into which Nimrod is said to come and build Nineveh, &c. [Asshur:]

ARAM, part of Syria and Mesopotamia [Arámsy-mes.]

Land of Uz, Judæa peræa and the adjoining parts of Arabia deserta and Petræa [Uzjúp-arad];

LUD, or Lydia in Asia minor [Ludlyd]

The Memorial Lines.

Ophchers, Havisus-car, Elasus-pers, Arámsy-mes,
Asshur,
Uzjúp-arad, Ludlyd —————

Countries mentioned in the Scriptures, and denominated from the posterity of JAPHET, (eldest son of Noah,) whose family is supposed to have peopled, besides a considerable part of Asia, all Europe.

MADAI, called by heathen writers Media [Mad]

GOMER, thought to be Albania, on the Euxine Sea [Gomerab]

TOGARMAH, Cappadocia [Togacap]

ASHKENAZ, Phrygia [Ashkeph]

TUBAL, Iberia in Asia [Tubibéri]

MESHECH, the country lying about the Montes

Moschici, between Colchis and Armenia major. [*Meshéchmosch*]

MAGOG, the parts of *Scythia* adjoining to the plantations of *Meshech*, *Tubal*, and *Gomer* [*Magscythi-mesh*]

JAVAN, ancient *Greece* [*Javgree*]

ELISHAH, or the Isles of *Elisha*, the Isles of the *Archipelago* [*Elísharch*]

KITTIM understood of *Italy*, Dan. xi. 30. and of *Macedonia* in the book of *Maccabees* [*Kittita*]

TARSHISH, by *Josephus* understood to be *Cilicia*, by others *Old Spain*, by others *Carthage* [*Tarshcil*]

The Memorial Lines.

Mad, *Gomeralb*, *Togacap*, *Ashkeph*, *Tubibéri*, *Meshéchmosch*,

Magscythi-mesh, *Javgree*, *Elísharch*, *Kittita*, *Tarshcil*.

Countries mentioned in Scripture, denominated from the posterity of HAM (youngest son of Noah) whose family peopled Africa, with the adjoining parts of Asia.

Land of CUSH, (commonly rendered *Æthiopia*,) [*Cushæthiop*] under which name seems to have been contained most of Arabia, distinguished into several parts, denominated from the posterity of Cush, as,

SHEBA, *Arabia Felix* [*Shebara-F*]

HAVILAH, part of *Arabia deserta*, next to *Babylonia* [*Havara-d*]

RAAMATH and DEDAN, parts on the *Persian Gulf* [*Ra-dédpe-gu*]

MIZRAIM, or *Ægypt* [*MizrÆ*]

LUB or Lybim, that is, *Libya* properly so called [*Lub*]

PHUT, the more remote parts of *Libya* largely taken [*Phutlib*]

Land of CANAAN lying between the river *Jordan* and the *Mediterranean* [*Cánajor-M*]

Land of HAMATH, north part of *Phœnicia*, and adjoining parts of *Syria propria* [*Hamáthphæn-S*]

ARVAD, or Arpad, or the Isle *Aradus*, lying over-against *Hamath* [*Arvhama*]

Land of the PHILISTINES, *Palestine* proper [Philpal]

The Memorial Lines.

Cushæthiop [Shebara-F, Havara-d, Ra-dédpe-gu]
MizrÆ,
Lub, Phutlib, Cánajor-M, Hamáthphœn-S, Arvhama,
Philpal.

TABLE XXI.

Division of the Holy Land.

The kingdom of JUDAH contained the tribes of Judah and B-enjamin [Ju-B]

The kingdom of ISRAEL contained the tribes of
A-sher, Nēptali, Zēbulon, IS-
Sachar, half of MANasseh, DAN, } west of Jordan
E-phraim, Simeon
REUBEN, G-ad, the other half of } east of Jordan
M-anasseh

The several nations were the CANAANITES, the GIR-gashites, the HITTITES, the HIVITES, the AMORITES, the JEBUSITES, and the P-erizzites.

The Memorial Line.

ISR=A-NeZe -M, IssMa -G, Dan-E -Réub, Si:
Ca-Girg-Hit-Hiv, Am-Je-P.

The Division of the Holy Land in the New Testament compared with the Divisions thereof among the twelve Tribes in the Old Testament.

GALilee contained A-sher, Nēptali, Z-ebulon, and Issachar [GAL=A-Ne-ZIss].

SAMaria contained EPHraim, with the half of MANasseh [SAM=ManEph]

Judæa contained Dan, parts of Simeon and Judah, with B-enjamin [JU=DánSi-Ju-B]

Idumæa contained the south parts of Simeon and J-udah, and some part of the land of E-dom [Idu=Si-JE]

PERæa contained R-euben, Gad, and the other half of M-anasseh [PER=MGaR]

The Memorial Line.

GAL=A-NeZIss. SAM=ManEph. JU=Dán Si-Ju-B.
ID=Si-JE. PER=MGaR.

The land of EDOM bordered on the South of Judæa [EdómSjud]

The land of the MOABITES lay on the N. E. of Edom [MóaNEd]

The land of the AMMONITES lay on the N. E. of Moab [AmNEmoab]

The ISHMAELITES, MADIANITES, and AMALEKITES, lived promiscuously together, and therefore seem to be denoted by the common name of the Mingled People, or Arabians, from אֲרָב *miscuit*, from whence the Greek appellation of Ἀραβί, or Ἀραβίς [Ish-mad-amárab]

The Memorial Line.

EdómSjud, MóaNEd, AmNEmoab, Ish-mad-amárab.

TABLE XXII.

The most remarkable Rivers, with the Places where they rise, and the Seas into which they fall.

IN EUROPE.

The VOLGA, the greatest river in Europe, rises in Russia, and falls into the Caspian sea [Volrus-ca]

The DANUBE rises in Suabia, and falls into the Euxine sea [Dansuab-eux]

The RHINE rises in the country of the Grisons, and falls into the German Ocean [Rhingris-gerO]

The VISTULA, or Wesel, rises in Poland, and falls into the Baltic [Vistpo-ba]

The NIEPER rises in Poland, and falls into the Euxine sea [NieP-eux]

The DWINA rises in Russia, and falls into the gulf of the Northern Ocean, called the White sea [Dwin-rus-whi]

The TAIO in *Spain* falls into the *Atlantic Ocean*
[Taisp-atl-oc]

The IBERUS, or Ebro, in Spain, } fall into the
The RHODANUS, or Rhone, in } *Mediterranean*
France [Ib-Rhodmed]

The ELBE in Germany falls into the *German Ocean*
[Elbger-oc]

The Oder in Germany falls into the *Baltic* [Odbalt]

IN ASIA.

T-igris and EUPHRATES rise in *Armenia major*, and, having joined streams on the south-east of *Mesopotamia*, fall into the *Sinus Persicus* [T-Eupharm-siP]

JORDAN rising in the border of *Nephtali*, and passing through the lake of *Gennesaret*, falls into the *Salt sea*
[Jordneph-salt]

GANGES in *India* falls into the Bay of *Bengal*
[Gán-I-beng]

IN AFRICA.

The NILE, running through the middle of *Egypt*, falls into the *Mediterranean* [Nilmedi]

The SENEGAL runs through *Negroland* into the *Atlantic Ocean* [Sénat]

The Memorial Lines.

Volrus-ca, Dansuab-eux, Rhingris-gerO, Vistpo-ba,
NieP-eux.

Dwinrus-whi, Taisp-atl-oc, Ib-Rhodmed, Elbger-oc,
Odbalt.

T-Eupharm-siP, Gán-I-beng, Jordneph-salt; Nilmedi,
Sénat.

ASTRONOMICA.

SECTION IV.

The Application of this Art to Astronomy and Chronology.

THE *technical* endings affixed to the beginnings of the names of the planets represent the number of miles of their diameters, distances, magnitudes, &c. according to the general key. Where the beginning of the word is *technical*, it is composed of the syllables or letters distinguished in the tables by small capitals.

TABLE I.

The D-iameters, &c. of the Planets in English miles, according to Dr. Derham's Astro-theology.

| | English Miles. |
|---------------------------------|----------------|
| Luna [LuDdapu] | 2175 |
| MERCURY [MercúDepok] | 2748 |
| MARS [MarDokpu] | 4875 |
| VENUS [VeDoneip] | 4987 |
| TERRÆ DIAMETER [TerDiapousoi,k] | 7967,8 |
| SATURN [SaDní-olu] | 93,451 |
| JUPITER [JuDaty-sli] | 130,653 |
| SOLIS DIAMETER [SolDiked-áfei] | 822,148 |

The D-iameters of their ORBITS.

| | |
|---------------------------------|--------------|
| SATURN [D-orb-Sátasob-les-teis] | 1641.526,386 |
| JUPITER [JuRBkoúl-atoth] | 895.134,000 |
| MARS [MaRBese-deid-naz] | 262.282,910 |
| TERRÆ [D-orb-Terboïd-áze-poul] | 172.102,795 |
| MERCURY [MeRBsau-sebth] | 66.621,000 |

| | |
|--|----------------|
| VENUS [VeRBbef-okoi-baf] | English Miles. |
| LUNA [D-orb-lunopou-nyl] | 124,487,114 |
| SATURNI ANNULI DIAM. or the diameter of Saturn's ring } [Sat-anu-didáz-daul] | 479,905 |
| —Ejusdem LATITUDO, or the breadth of Saturn's ring } [—latidou-eg] | 210,265 |
| TERRÆ SUPERFICIES, or the su- perficial content of the earth } [Ter-superann-fof-ezau] | 29,200 |
| —Ejusdem DIAMETER [Dia- pousoi,k] | 199.444,206 |
| —Ejusdem ORBITÆ PERIMETER } [Permufy-skau-del] | 7967,8 |
| | 540.686,225 |

*The Magnitudes or solid Contents in cubic Miles of
the larger Planets.*

MAGNITUDO.

| | |
|---|-------------------------|
| | Cubic Miles. |
| TERRÆ [Ter-magnitéso-klaum] | 264,856.000,000 |
| SOLIS [Mag-sólisëouúz- noia-mil-mil] } | 290,971.000,000.000,000 |
| JOVIS [Mag-jovnez-záb- ezym] } | 920.011,200.000,000 |
| SATURNI [Sat-magnit-oép- dak & izym] } | 427.218,300.000,000 |

1. The Ambit or circumference.

| | |
|---------------------------|----------------|
| | English Miles. |
| JOVIS [Am-jovisipou-zot] | 379,043 |
| T-erræ [Am-Tel-yib] | 25,031 |
| SOLIS [Am-sole-leid-koit] | 2.582,873 |

The Memorial Lines.

LuDdapu, MercúDepok, MarDokpu, TerDiapousoi,k,
JuDaty, sli, VeDoneip, SaDní-ola, SolDiked-áfei.

D-orb-Sátasob-les-teis, JuRBkouúl-atóth, MarRBese-
deid-naz,
D-orb-Terboid-áze-poul, MeRBsau-sebth, VeRBbef-
okoí-baf,
Sat-anu-didáz-daul—latidóu-eg, D-orb-lunopóu-nyl,
Ter-superann-fóf-ezau—diapousoi,k — Permufy,skau-
del,
Ter-magnitéso-klaum, Mag-sólisëouúz-noia,mil-mil,
Mag-jovnez-záb-eyzm, Sat-magnit-oép-dak & ízym,
Am-jovisipóu-zot, Am-Tet-yib, Am-sole-leid-koit.

TABLE II.

*The Diameters, &c. of the Planets, according to
Mr. Whistonⁱ.*

| | | |
|----------------------|---------|---|
| Luna [LuDdedi] | 2223 | } English Miles of 5000 Paris feet. |
| MERCURY [MércúDepap] | 2717 | |
| MARS [MarDekbau] | 2816 | |
| TERRA [Ter-Diakéze] | 8202 | |
| Jupiter [JuDle-lea] | 52,522 | |
| VENUS [VeDonob] | 4941 | |
| SATURN [SaDot-nel] | 43,925 | } |
| SOL [Sol-Difouf-ázy] | 494,100 | |

2. ^k Their Distances from the sun.

| | |
|-------------------------------|----------------|
| | English Miles. |
| SATURN [Distat-Satlái-lozth] | 513.540,000 |
| MARS [Dist-Márke-dodth] | 82.242,000 |
| MERCURY [Dist-Merez-ouleth] | 20.952,000 |
| JUPITER [Dist-Jupideiz-uketh] | 280.582,000 |

ⁱ Theory of the Earth, page 31, &c.

^k The distances of the planets from the sun, according to Dr. Derham, are as follow :

| | |
|-------------------------------|-------------|
| SATURN [Dist-Satkez-paut-ani] | 820.763,193 |
| MARS [Dist-Marbib-bob-olu] | 131.141,455 |

| | |
|----------------------------|----------------|
| | English Miles. |
| TERRA [Dis-Terlom] | 54.000,000 |
| VENUS [Dista-Vetou-znauth] | 39.096,000 |

3. The QUANTITY of matter in the heavenly bodies is in the proportions following :

| | |
|-----------------------------------|----------------------|
| TERRA [Quan-Tera] | 00001 |
| LUNA [Quan-Lun, <i>res</i>] | 00000 $\frac{1}{20}$ |
| JUPITER [Quan-Jupsy] | 00060 |
| SATURN [Quan-Saturek, <i>ro</i>] | 00028 $\frac{1}{4}$ |
| SOL [Quan-Solsau- <i>sny</i>] | 66,690 |

4. The weight (PONDUS) of bodies on the surface of

| | |
|---------------------------------|--------------------|
| SATURN [Pon-Sáturuts] | 536 |
| LUNA [P-Lunsiz] | 630 |
| JUPITER [Pon-Jukzo, <i>re</i>] | 804 $\frac{1}{2}$ |
| TERRA [Pon-Teraduk, <i>re</i>] | 1258 $\frac{1}{2}$ |
| SOL [Pon-Solazth] | 10,000 |

5. The DENSITIES of the same.

| | |
|---------------------|-----|
| SOL [Den-Solag] | 100 |
| LUNA [Den-Lunoig] | 700 |
| TERRA [Den-Terteip] | 387 |
| SATURN [Den-Sasy] | 60 |
| JUPITER [Den-Jups] | 76 |

N. B. Mr. Whiston supposes the sun's parallax to be 32". Dr. Derham (with Cassini) 9 sec. and half.

The Memorial Lines.

1. LuDdedi, MércúDepap, MarDekbau, Ter-Diakéze, JuDle-led, VeDonob, SaDot-nel, Sol-Difouf-ázy.

| | |
|-------------------------------|-------------|
| MERCURY [Dist-Merit-ibz-ug] | 33.310,500 |
| JUPITER [Dist-Jupifop-usoith] | 447.567,000 |
| TERRA [Dist-Terkau-sub-touk] | 86.051,398 |
| VENUS [Dist-Vesc-dot-lup] | 62.243,557 |

2. Distat-Satlái-lozth, Dist-Márke-dodth, Dist-Merez-ouleth,
Dist-Jupideiz-uketh, Dis-Terlom, Dista-Vetou-znauth.
3. Quan-Tera, Quan-Lun, res, Quan-Jupsy, Quan-Saturek-ro,
Quan-Solsau-sny.
4. Pon-Sáturuts, P-Lunsiz, Pon-Jukzo, re, Pon-Ter-aduk-re,
Pon-Solazth.
5. Den-Solag, Den-Lunoig, Den-Terteip, Den-Sasy,
Den-Jups.

TABLE III.

The periodical Times of the R-evolutions of each Planet about the Sun are as follow :

| | | | |
|------------|-------|---|--------------------------|
| MERCURY in | 88 | $\left. \begin{array}{l} \text{Days} \\ \text{or} \\ \text{about} \end{array} \right\}$ | 3 months. |
| VENUS | 224 | | 7 months $\frac{1}{2}$. |
| MARS | 287 | | 2 years. |
| JUPITER | 4333 | | 12 years. |
| SATURN | 10759 | | 30 years. |

MercReik, SatRazpun, MarsRaukoi, VenRedo, Jup-Rottt,
Merc-Revo-ment, VeR-mep-h, Mars Rand, JupRanbe,
SatRanty.

N. B. Men vel me Mensibus, an Annis, h half.

The Distance of the earth from the sun being divided into 10 parts, or Decimals, the distance of MERCURY from the sun will be as 4 of them, of VENUS as 6, of MARS as 15, of JUPITER as 52, of SATURN as 95.

Ter-Distaz, Méro, Vens, Marsal, Jupiterle, Saturnoul.

The *Sun* is distant from the earth 21600 SEMI-diameters of the earth = 86.051,398 miles.

The Moon $60\frac{1}{2}$ semidiameters = 239,952 miles.

Dist-Sol-sémida-syz = kau-zub-touk ———

————— Distat-Lun-semsy,ro = din-nud.

The motion of the *Sun* round its aXis is performed in 25 days and 6 hours [SólXdu,ro]. The motion of Jupiter round its aXis is performed in 9 hours 56 minutes [JuXn,us]; that of the earth in 24 hours: so that the M-otion of the sun round its axis is at the rate of 4262 miles an hour [SolMfese]; the M-otion of Jupiter round its axis 38159 miles an hour [JuMteibun]; the M-otion of the *Earth* round its axis is 1043 miles an hour [TerMázfi].

SolMfese, JuMteibun, TerMázfi, SólXdu,ro, JuXn-us.

The apparent diameter of the sun in summer (ÆSTATE Solis Diameter) is 31 M-inutes 40 S-econds [Æstat-SoDi-míb soz]

In winter (HYEME) 42 M-inutes 47 S-econds [———— Hye-míd-sop]

If the sun is supposed to go round the earth, its diurnal motion will be 22.528,366 M-iles in an HOur [Sol-m-hode-lek-taus]

Æstat-So-Di-míb-soz ——— Hye-míd-sop; Sol-m-hode-lek-taus.

The three Comets, whose periods were thought to have been discovered. Derham's Astro-Theology, p. 56.

| | | | | | | | | | | |
|----------|---|------|---|------------------------|---|-----|---|--------|---|------|
| That | { | 1682 | { | calculated | { | 75 | { | and to | { | 1758 |
| which | | 1661 | | to perform | | 129 | | appear | | 1789 |
| appeared | | 1680 | | its revolu- tion in | | 575 | | again | | 2225 |

Comske-pu sáub-adou sky-loil: puk pein & eëlu.

The Memorial Lines.

MercReik, SatRazpun, MarsRaukoi, VenRedo, Jup-Rottt,

Merc-Revo-ment, VeR-mep-h, MarsRand, JupRan-be, SatRanty.

Ter-Distaz, Méro, Vens, Marsal, Jupiterle, Saturnoul.

Dist-Sol-sémida-syz = kau-zub-touk, Lunsy,ro = din-nud.

SolMfese, JuMteibun, TerMázfi, SólXdu,ro, JuXn,us.

Æstat-So-Di-míb-soz — Hye-míd-sop; Sol-m-hode-lek-taus.

Comske-pu saúb-adou sky-loil: puk pein & eëlu.

TABLE IV.

Chronological Notes.

| | d. | h. | m. | s. | th. |
|---|-----|----|----|----|-----|
| Solar month (MENSIS SOLARIS) } consists of [Men-Solarty-by-dou] | 30 | 10 | 29 | 00 | 0 |
| Lunar SYNODAL month [Synodén-be-ff-t] | 29 | 12 | 44 | 03 | 0 |
| Lunar PERIODICAL month [Men-peridoi-p-ot] | 27 | 07 | 43 | 00 | 0 |
| The cycle of the moon less (CYCLUS LUNARIS MINOR) than 19 Julian years [Cyc-Lu-min-ha-doi-ta-ll] | 00 | 01 | 27 | 31 | 55 |
| (This difference arises to a whole day, and consequently throws the new moons back a whole day in 312 years (ANNIS) [Ann-tad]) | | | | | |
| The tropical or natural solar year less than the Julian (Annus TROPICUS MINOR JULIANO) eleven M-inutes; [Trop-min-juli-mab] and consequently the equinoxes happen a day sooner in 130 years [biz] | 00 | 00 | 11 | 00 | 0 |
| The lunar year (LUNARIS ANNUS) [Lun-ánilo-hei-mok] | 354 | 08 | 48 | 00 | 0 |

| | d. | h. | m. | s. | thr. |
|---|-----|----|----|----|------|
| The EPACT [Epacaz-da-b] | 10 | 21 | 01 | 00 | 0 |
| The solar year [SOLARIS ANNUS) [Sól-anisú-l-on] | 365 | 05 | 49 | 00 | 0 |
| Between the VERNAL and AU- tumnal equinox [Vern-autaks- hak-miz] | | | | | |
| Between the AUTUMNAL and VER- nal equinox [Autum-Vernbožk- ab-an] | 178 | 11 | 19 | 00 | 0 |
| | | | | | |

The METONIC period was invented by Meto, in the year before Christ 430, consisting of 19 years [Metfiz-bou]

The CALIPPIC period was invented by Calippus, in the year before Christ 330, consisting of 76 years [Calipitz-ois]

The DIONYSIAN period was invented by Dionysius Exiguus, Ann. Dom. 527, consisting of 532 years [Diolep-lid]

The JULIAN period was invented by Joseph SCALIGER, consisting of 7980 years [Júl-scalipóuky]

The vulgar year of Christ was in the fourth of the indiction, the tenth of the cycle of the sun, the second of the cycle of the moon.

Indic. erat quarto, decimo Sol, Luna secundo.

To find the Year of the Julian Period, the Years of the other Cycles being given.

Multiply the cycle of the Sun into 4845 [Sol in okol]

———— the cycle of the Moon into 4200 [Lunfeg]

———— the INDICATION into 6916 [Indicsnas]

Divide the PRODUCT by 7980 [Div-produpouky]

The remainder is the year.

The Sunday letters which begin every month are frequently known by the two English verses,

At Dover dwells George Brown, &c. (see p. 182.)

But perhaps they may be more readily remembered by the following line, which lays the reader under no necessity of counting the order of the words before he can tell which month they answer to, every month ending with the letter which belongs to the first day of it.

*Ja Fd Mád Aprig Mayb June Julg Aúc Sef Octa
Novéd Def.*

MARCH, MAY, JULY, OCTOBER, have NONES on the 7 day, and the Ides on 15. [Mar-ma-jul-oc = Nop-Idal] The rest (CÆTERI) on the 5 and 13. [Cætl-at]

APRIL, JUNE, SEPTEMBER, and NOVEMBER, have thirty (TRIGINTA) days [Ap-jún-se-no = trigint]

Mar-má-jul-oc = Nop-Idal, Cætl-at: Ap-jún-se-no = trigint.

In a year (ANNO) are 365 days, 8765 HOURS, 525,949 MINUTES, 31,556,937 SECONDS.
An = ditaul = Horeipaul = Minlel-non = Secta-lus-
outoi.

The motion of the firmament, or fixed stars, is 50" in a year, or a degree in 72 years. According to which rate the motion (called the PLATONIC year) is accomplished in 25,920 years. [An-Plato = dunez]

The twelve signs: ARIES, TAURUS, GEMINI, CANCER, LEO, VIRGO, LIBRA, SCORPIO, SAGITTARIUS, CAPRICORN, AQUARIUS, PISCES.

Ar-ta-ge, Can-leo-vir, Lib-scór-sagi, Capric-aquár-pis.

The Memorial Lines.

Men-Solar^{ty}-by-dou, Synodén-be-ff-t, Men-peridoi-p-ot,

Cyc-Lu-min-ha-doi-ta-ll (Anntad) Trop-min-juli-mab, (biz.)

Lun-ánilo-hei-mok, Epacaz-da-b, Sól-anisú-l-on,
Vern-autaks-hak-miz, Autum-Vernboík-ab-an. —

Metfiz-bou, Calipitz-ois, Diolep-lid, Júl-scalipóuky.

Indic. erat quarto, decimo Sol, Luna secundo.

Sol in okol, Lunfeg, Indicsnas, Dív-produpouky.

Ja Fd Mád Aprig Mayb June Julg Aúc Sef Octa
Novéd Def.

Mar-má-jul-oc = Nop-Idal, Cætl-at: Ap-jún-se-no
= trigint.

An = ditaul = Horeipaul = Minlel-non = Secta-lus-
outoi.

An-Plato = dunez.

Ar-ta-ge, Can-leo-vir,- Lib-scór-sagi, Capric-aquár-
pis.



PONDERA, NUMMI, MENSURÆ.

SECTION V.

The Application of this Art to Coins, Weights, and Measures.

THE beginning of the words is composed of the initial letters; thus At-ta stands for ATTIC Talent; HET for HEBREW T-alent; AD for A-ttic D-rachm; ALD for ALEXANDRIAN D-rachm; HETO for Hebrew talent of gold (HET standing for HEBREW T-alent, as before, and O for Or, or Gold); RoL for ROMAN L-ibra, Den for DENARIUS, Shek for SHEKEL, GreF for GRECIAN F-oot, HeC for HEBREW C-ubit, RoFsq for ROMAN F-oot Square, &c.

The *italic* endings of the words represent the number of pounds, shillings, and pence, which are separated from each other by *hyphens*, or else signified by the Roman letters l. s. d. The double lines denote equality: thus $AM = lrag = t-ei-n$, signifies that an A-ttic M-ina, which is equal to 100 Drachms, was 3 pounds 8 shillings and 9 pence. The letters, though separated, are to be pronounced together; as *t-ei-n tein*. The reader is to be reminded here that *re* signifies $\frac{1}{2}$, *ro* $\frac{1}{4}$, &c. according to the general rule, page 4. But *note*, that instead of the fraction *re*, the letter *h* is sometimes used for half, as *oikbe-h* = $7812\frac{1}{2}$ sc. 7812 pounds 10 shillings.

TABLE I.

Hebrew, Attic, Babylonish, Alexandrian, and Roman Money¹.

| | l. | s. | d. |
|--|------|-----------------|-----------------|
| An Artic TAlent = 60 M-inas [At- ta=mauz=ezáu-su] | 206 | 05 | 0 |
| An A-ttic M-ina = 100 Drachms [AM=drag=t-ei-n] | 03 | 08 | 9 |
| An HEbrew T-alent = 50 Minas = 3000 Shekels [HÉT=mily=shítth =fuz] | 450 | 00 | 0 |
| An HEbrew M-ina = 60 Shekels [HEM=shauz=lou] | 09 | 00 | 0 |
| A BABYlonian T-alent [BAT=eóz-be-s] | 240 | 12 | 6 |
| A BABYlonian T-alent of Gold [Ba- TO=teilz] | 3850 | 00 | 0 |
| An A-ttic T-alent of Gold [ATO=tig] | 3300 | 00 | 0 |
| An HEbrew T-alent of Gold [HEO =peg] | 7200 | 00 | 0 |
| An A-ttic D-rachm [AD=dei,ro] | 00 | 00 | 8 $\frac{1}{4}$ |
| An HEbrew D-rachm [HED=dou] | 00 | 00 | 9 |
| A ROman L-ibra = 96 D-enarii [ROL=dous=li] | 03 | 00 | 0 |
| ^m A ROman TAlent = 72 LIBRæ = [Róm-ta=liboid=das] | 216 | 00 | 0 |
| An ALEXandrian DRACHM [Al-drach =sa-ds] | 01 | 6 | |
| An ITALic MIna [Ita-mí=lt] | 3 | 00 | 0 |
| A SHEkel = 2 BEkas [Shek = Béd =si] | 03 | 0 | |
| A ROman D-enarius = 4 Sesterces [R6D=Seso=doi,re] | 00 | 7 $\frac{1}{2}$ | |

¹ See the Preface to Dr. Prideaux's Connection.

^m Others make a Roman TAlent=6000 D-enarii=24 Sester-
tiums=187l. 10s. [Tal=Dauth=sésdo=lacip-h]

| | | |
|--|---|----------------------|
| A Sesterce, $\frac{1}{4}$ of a denarius, sc. | | |
| LLS. (vulgo HS.) duo asses cum semisse [Ses = da-fi, re] a penny three farthings and half a farthing | | 00 1 $\frac{3}{4}$ q |
| Sestertium, or 1000 S-esterces | | 7 16 3 |
| ⁿ [Sath = p-as-t] | | |
| Decem sestertium, 10000 Sesterces | | 78 02 6 |
| [Sesbyth = pei-d-s] | | |
| Decies sestertium, or 1,000,000 Sesterces [Sesteram = oikbe-h] | | 7812 10 0 |
| DENARIUS (7d. $\frac{1}{2}$) = | $\left\{ \begin{array}{l} 2 \text{ Victoriati } [= \text{Vid}] \\ 4 \text{ Sestertii } [= \text{Sef}] \\ 6 \text{ Oboli } [= \text{Obs}] \\ 10 \text{ Libellæ } [= \text{Libaz}] \\ 20 \text{ Sembellæ } [= \text{Semdy}] \\ 40 \text{ TERUNCII } [= \text{Terunfy}] \end{array} \right.$ | |
| Den (doi, re) = Vid = Sef = Obs = Libaz = Semdy = Terunfy. | | |

The Memorial Lines.

Atta = mauz = ezáu-su, AM = drag = t-ei-n, HÉT = mily = shíth = fuz.
 HEM = shauz = lou, BAT = eóz-be-s, BATO = teilz, ATO = tig, HETO = pegque.
 Ad = dei, ro, Hed = dou, ROL = dous = li, Róm-ta = liboid-das.
 Al-drach = sa-ds, Ita-mí = lt, Shek = Béd = si, RÓD = Seso = doi, re.
 Ses = da, fi, re, Sath = p-as-t, Sesbyth = pei-d-s, Sesteram = oikbe-h.
 Den (doi, re) = Vid = Sef = Obs = Libaz = Semdy = Terunfy.

ⁿ Dr. Arbuthnot makes the Sesterce a penny three farthings, and three fourths of a farthing; [Ses = da-fi, tro] according to which a sestertium will be 8l. 1s. 5d. $\frac{1}{2}$ [Sath = k-a-l-h] Decies Sestertium, or 1,000,000 of sesterces = 8072l. 18s. 4d. [Sest-ám = kype-sak-do]

Tal = Dauth = Sésdo = laeip-h, Sath = k-a-l-h, Sestám = kype sak-do,

TABLE II.

Measures of Length.

The method observed in the following tables is, first, to give the ancient measures, weights, &c. in the proportions which they bear to each other; and then the proportion which they bear to those of our own country. To which I subjoin some tables, by which the reader will be enabled to make any calculations of this kind with the utmost ease and readiness.

English Measures of Length.

| | | |
|--|---|---------------------------------|
| English MILE = | { | 8 Furlongs [=Furk] |
| | | 320 P-oles [=Pidz] |
| | | 1760 Yards [=Yarapauz] |
| | | 5280 F-eet [=Fudeiz] |
| | | 63360 Inches [=Inautisy] |
| | | 190080 B-arley corns [Banzyeiz] |
| Mil = Furk = Pidz = Yarapauz = Fudeiz = Inautisy = Banzyeiz. | | |

| | | | |
|---------------------|---|--------|------------|
| | | F-eet. | |
| MILE [=8 furlongs] | = | 5280 | Mil=Fudeiz |
| FURLONG [=40 poles] | = | 660 | Fur=Fsauz |
| POLE [=5½ yards] | = | 16½ | Pol=Fas,re |
| CUBIT [=2 spans] | = | 1½ | Cub=Fa,re |
| FATHOM [=2 yards] | = | 6 | Fat=Fau |

Mil=Fudeiz, Fur=Fsauz, Pol=Fas,re, Cub=Fa,re,
Fat=Fau.

Grecian Measures of Length.

| | | |
|-------------------------------|---|-------------------------|
| Μίλ-ιον = | { | 8 Στα-δια [=Στάκ] |
| | | 800 Ὀγγ-υιαὶ [=Ὀγεῖγ] |
| | | 4800 Πόδ-εις [=Πόδfeig] |
| Πῆχ-υς = 2 Σπι-θαμ-αί. | | |
| Πῆς = 4 Δῶρ-α = 16 Δάκτ-υλοι. | | |

Μίλ = Σταθή = Ὀρεῖς = Πόδες. Πῆχ = Σπιθαμή. Πῆς
= Δῶρον = Δάκτυλος.

| | | |
|---------------------------|--------|--------------|
| Μίλ-ιον (= 8 Σταδία) | Πόδ-ες | Μίλ = Πόδες. |
| ᾽Στάδι-ον (= 100 Ὀρεγναι) | 4800 | Στάδι = Παυ. |
| ᾽Ορεγ-ναι (= 4 Πήχυς) | 600 | ᾽Ορεγ = Παυ. |
| | 6 | |

| | ᾽ Δάκ-τυλοι | |
|-----------------------|-------------|----------------|
| Πῆχ-υς (= 2 Σπιθαμαί) | = 24 | Πῆχ = Δef |
| Πυγών (= 2 Λίχαι) | = 20 | Πυγών = Δez |
| Πυγ-μῆ (= 1½ Σπιθαμή) | = 18 | Πυγ = Δak |
| ᾽Πῆς (= 4 Δῶρα) | = 16 | Πῆς = Δάκτυλος |
| Σπιθα-μῆ (= 3 Δῶρα) | = 12 | Σπιθα = Δad |
| ᾽Ορεθ-όδωρον | = 11 | ᾽Ορεθ = Δab |
| Λίχ-ας | = 10 | Λίχ = Δάκτυλος |
| ᾽Δῶ-ρον | = 4 | Δῶ = Δάκτυλος |

Στάδι = Παυ & ᾽Ορεγ = Παυ: Πῆχ = Δef, Πυγ = Δakque
Πυγών = Δez,
Πῆς = Δάκτυλος, Σπιθα = Δad, ᾽Ορεθ = Δab, Λίχ = Δάκτυλος,
Δῶ = Δάκτυλος.

* Called also Ἀνλός, from whence came Δίανλός, a space of two stadia.

† The Grecian measures, from which the Romans borrowed theirs, were commonly taken from the members of a human body. Δάκτυλος, a finger's breadth; Δῶρον, a hand's breadth, or four fingers; Λίχας, from the thumb to the middle finger; ᾽Ορεθόδωρον, the length of the hand, from the upper part to the extremity of the longest finger; Σπιθαμή, the length of the hand extended, between the thumb and the little finger; Πῆς, the foot = 4 hands' breadth; Πῆχυς, from the elbow to the extremity of the fingers; Πυγών, from the elbow to the second joint of the fingers, or a cubit with the fingers inflected; Πυγμή, from the elbow, with the fingers quite clasped; ᾽Ορεγναι, from the extremity of one middle finger to the extremity of the other, the arms being extended.

‡ The Grecian foot was also, like the Roman, divided into 12 Ὀγγίαι or inches.

§ Δῶρον, the palm, so called, because gifts are made with the hand: called also Δοχμή, from δέχομαι, to receive, Δακτυλοδόχμη & Παλαιστή.

Roman Measures of Length.

| | | |
|--|---|-----------------------------|
| | { | 8 STADIA [=Stak] |
| MILLIARE = | | 1000 P-assus [=Path] |
| | | 4000 PALMIPEDES [=Palmpoth] |
| | | 5000 P-edes [=Puth] |
| PES = | { | 4 PALMI MINORES [=Pal-mino] |
| | | 12 UNCIÆ [=Uncad] |
| | | 16 DIGITI [=Digitas] |
| MIL = Stak = Path = Palmpoth. PES = Pal-mino = Digitas = Uncad. | | |

| | | |
|--|-------------------------------|----------------|
| MILLIARE (=8 stadia) | ^{P-edes} = 5000 | MIL-ROM = Puth |
| STADIUM (=125 passus) | = 625 | Stadi = Psel |
| PASSUS (=4 palmipedes) | = 5 | Pass = Pu |
| | ^{DIGITI^s} | |
| ⁱ CUBITUS (=1½ pes) | = 24 | Cub = Digitef |
| PALMIPES (=5 palmi) | = 20 | Palmíp = Dez |
| ⁱⁱ PES (=4 palmi) | = 16 | Pes = Das |
| ⁱⁱⁱ PALMUS (=3 unciæ) | = 4 | Palm = Do |
| ^v UNCIA | = 1½ | Un = Da, re |
| MIL-ROM = Puth, Stadi = Psel, Pass = Pu : Cub = Digitef, | | |
| Palmíp = Dez, | | |
| PES = Das, Palm = Do, Un-Da, re ——— | | |

Jewish Measures of Length.

| | | | |
|---------|---|------------------------------------|--------------|
| MILE = | { | 2 SABBATH-days' journeys [=Sábate] | |
| | | 10 STADIA [=Staz] | |
| | | 4000 CUBITS [=Cubith] | |
| CUBIT = | { | 2 SPANS the greater | } [=Spanë-i] |
| | | 3 SPANS the less | |
| | | 6 PALMS [=Palmau] | |
| | | 24 DIGITS [=Digitef] | |

^s Some divide the *Digitus* into 4 *Grana*.

^t Some use *Ulna* for *Cubitus*. Pliny takes them for different measures; his *Ulna* answers to the Greek *Ὀκτυὰ*.

^u *Pes* was divided, as the *As*, into 12 parts; hence *Dextans* = 10 inches, *Dodrans* = 9 inches, &c.

^x Called *Palmus minor*, to distinguish it from a greater, which some authors make equal to 12 digits.

^y Called sometimes *Pollex*.

Cub=Spanē-i=Palman=Digitef. Mil=Sábate=Staz
=Coth.

| CUBITS | | |
|----------------------------------|------|--------------|
| Eastern MILE (=10 stadia) | 4000 | Mil=Coth |
| STADIUM = | 400 | Stad=Cubitog |
| ² SCHÆNUS OF Chebal = | 80 | Schœn=eiz |
| ARABIAN POLE = | 8 | Ara-Pol=k |
| EZEKIEL'S REED, or Kaneh = | 6 | Eze-Ree=s |
| FATHOM = | 4 | Fath=o |

| DIGITS | | |
|--------------------------------|----|-------------|
| CUBIT, or Ammah = | 24 | Cub=Digitef |
| ^a SPAN, or Zereth = | 12 | Span=Dad |
| PALM, or Tophach = | 4 | Palm=Do |

Mil=Coth,
Stad=Cubitog, Schœn=eiz, Ara-Pol=k, Eze-Ree=s,
Fath=o : Span=Dad,
Cub=Digitef, Palm=Do : Para=milt

N. B. The PARASANG is a Persian measure, consisting of 30 stadia=3 MILES [Para=milt]

A day's journey is an uncertain measure, but amongst the Jews was generally reckoned 24 miles.

The Memorial Lines.

Mil=Furk=Pidz=Yarapauz=Fudeiz=Inautisy=
Banzyeiz.

Mil=Fudeiz, Fur=Fsauz, Pol=Fas,re, Cub=Fa,re,
Fat=Fau.

Μίλ = Στάκ = 'Ogeig = Πόδfeig, Πήχ = Σπιθαμε, Πῆς
= Δώρο = Δάκλας.

Στάδι = Παυγ & 'Oεγ = Παυ, Πήχ = Δef, Πυγ = Δakque
Πυγών = Δez.

Πῆς = Δάκλας, Σπιθα = Δad, 'Oεθ = Δab, Λίχ = Δάκby,
Δῶ = Δάκλο.

Mil = Stak = Path = Palmpoth. Pes = Pal-mino = Di-
gitas = Uncad.

² Called also *Pathil*.

^a There is likewise another word, *Gomed*, which the LXX render Σπιθαμή.

Mil-rom=Puth, Stadi=Psel, Pass=Pu : Cub=Digitef,
 Palmíp= Dez,
 Pes=Das, Palm=Do, Un=Da,re ———
 Cub=Spanë-i=Palmau=Digitef. Mil=Sábate=Staz
 =Coth.
 —————Mil=Coth,
 Stad=Cubitog, Schœn=eiz, Ara-Pol=k, Eze-Ree=s,
 Fath=o; Span=Dad,
 Cub=Digitef, Palm=Do : Para-milt—————

TABLE III.

The Proportion of the foregoing Measures to English Measures.

| | Inches. | Decimals. |
|--|-------------|-----------|
| GRECIAN D-igit [GréD= ,pulo] | 0 | ,75546875 |
| ROMAN D-igit [RoD= ,peldu] | 0 | ,72525 |
| ^b JEWISH D-igit [JewD= ,nad] | 0 | ,912 |
| | Feet. | Decimals. |
| GRECIAN F-oot [GreF= a,zydpdou] | 1 | ,00729½ |
| ROMAN F-oot [RoF= ,naup] | 0 | ,967 |
| HEBREW C-ubit [HeC= a,kef] | 1 | ,824 |
| GRECIAN C-ubit [GreC= a,laznil] | 1 | ,510935 |
| ROMAN C-ubit [RoC= b,olzu] | 1 | ,4505 |
| | Inches. | Decimals. |
| GRECIAN FOOt [Grec-Fo= be,zeipu] | 12 | ,0875 |
| ROMAN F-oot [RomF= ab,syf] | 11 | ,604 |
| HEBREW C-ubit [HeC= da,keik] | 21 | ,888 |
| GRECIAN C-ubit [GreC= bei,bib] | 18 | ,13125 |
| ROMAN C-ubit [RoC= boi,fys] | 17 | ,406 |
| | Eng. Miles. | Decimals. |
| ^c GRECIAN M-ile [GreM= ,pautzoun] | 0 | ,763099 |

^b In reducing the Jewish Measures, I have followed Bishop Cumberland, who makes the cubit=21,888 inches. Dr. Arbuthnot thinks it plain that there were two sorts of cubits, the sacred one and the profane or common one; the former exceeding the latter by a hand's breadth, or three inches. The profane cubit he makes equal to 17,82 inches; the sacred one=20,79 inches.

^c Dr. Arbuthnot makes the Grecian mile equal to 805,8½ English paces; which, agreeably to my own method, I have here

| | Eng. Miles. | Decimals. |
|-------------------------------------|-------------|-------------------------------------|
| ROMAN M-ile [RomM= ,nalpan] | 0 | ,915719 |
| HEBREW MILE [Heb-mil= ,a,teiboi] | 1 | ,3817 |
| GRECIAN Stadium [Gre-St= ,zoutleip] | 0 | ,093587 ² / ₅ |
| ROMAN Stadium [Ro-St= ,bafos] | | ,114465 |
| HEBREW Stadium [He-St= ,bik] | | ,13817 |

The Memorial Lines.

GréD= ,pulo, RoD= ,peldu, JewD= ,nad: RoF
 = ,naup, GreF= ,a,zypdou,
 RoC= ,b,olzu, HeC= ,a,kef, GreC= ,a,laznil: Grec-
 Fo= ,be,zeipu,
 RomF= ,ab,syf: GreM= ,pautz, RomM= ,nalpan,
 Heb-mil= ,a,teiboi:
 HeC= ,da,keik, RoC= ,boi,fys, GreC= ,bei,bib; Ro-St
 = ,bafos, He-St= ,bik,
 Gre-St= ,zoutleip

TABLE IV.

Superficial Measures.

| | Sq. Feet. | Dec. |
|---|------------|----------|
| English Acre [Ac= ,sFotlauz] | 43560 | ,00 |
| R-ood (=40 poles) [R= ,azkouz] | 10890 | ,00 |
| Pole [Pol= ,doid,el] | 272 | ,25 |
| | Sq. Yards. | |
| ACre = [Ac= ,Yarokoz] | 4840 | |
| | Sq. Feet. | Decim. |
| ROMAN Square Foot [RoFq= ,nil] | 0 | ,935089 |
| GRECIAN Sq. Foot [GreFq= ,á,zafauts] | 1 | ,0146365 |
| HEBREW Squ. C-ubit [HeCq= ,i,tésnois] | 3 | ,326976 |
| JUGERUM = R-oods 2. P-oles 18. Feet 250 | | ,05 |
| [Jug= ,Ré-Pak-Fely,zu] | | |
| Πλέθ-gev= P-oles 36. Feet 245. [Πλέθ= P's-Fdol] | | |

reduced to 0 ,763099 of a mile. Yet, according to his own computation, which makes 'Οργυια = 6 feet 0,525 inches, or, which is the same, 6,04375 feet, Σταδιον (=100 'Οργυια) will be 604,375 feet, and Μίλιον (=8 Σταδια) will be 4835 feet, exactly equal to the number of English feet in a Roman mile=0,915719 of a mile.

^d Egyptian "Aεε-εα=R-oods 3. P-oles 2. F-eet 55 $\frac{1}{4}$
 [Aεε=Ri-Pe-Ful,ro]

| | | |
|--------------------------------|-------------|--------|
| Jugerum [Jug= ,sakdo] | Eng. Acres. | Decim. |
| Πλίθρον [Πλίθ= ,etyst] | 0 ,618240 | |
| Egyptian "Aεεε-α [Aεεε= ,oist] | 0 ,230632 | |
| | 0 ,763768 | |

| | | | |
|-----------------------------------|-----------------|-------------|--------|
| Πλίθρον = | Greek Sq. Feet. | Eng. Sq. F. | Decim. |
| "Aεεεα $\frac{1}{2}$ Πλίθρον = | 10000 | = 10146 | ,3650 |
| "Aεεεα $\frac{1}{2}$ Πλίθρον = | 5000 | = 5073 | ,1825 |
| Egyptian "Aεεεα=10000 Squ. Cub. = | | 33269 | ,7600 |

| | | | |
|---------------------------------------|----------------|---------|--------|
| | Rom. Sq. Feet. | Sq. F. | Decim. |
| ^e Actus minimus 120 × 40 = | 4800 | = 4488 | ,4272 |
| Actus Quadratus 120 × 120 = | 14400 | = 13465 | ,2816 |
| Clima 60 × 60 = | 3600 | = 3366 | ,3204 |
| Versus 100 × 100 = | 10000 | = 9350 | ,8900 |
| ^f Jugerum=2 Actus Quad. = | 28800 | = 26930 | ,5632 |
| Uncia $\frac{1}{12}$ of the Jugerum = | 2400 | = 2244 | ,2136 |

The Memorial Lines.

Ac=sFotlauz, R=azkouz, Pol=doid,el: Ac=Yar-
 oko-zque:

GreFq=á,zafauts, RoFq=nil, HeCq=i,tesnois——
 Jug=Ré-Pak-Fely ,zu: Πλίθ=Pls-Fdol: "Aεε=Ri-
 Pe-Ful,ro.

Jug= ,sakdo, Πλίθ= ,etyst, "Aεεε= ,oist ——

TABLE V.

Measures of Capacity.

English Wine Measure.

Tun = $\left\{ \begin{array}{ll} 2 \text{ B-uts} & [=Be] \\ 3 \text{ Puncheons} & [=Pul] \\ 4 \text{ HOgsheads} & [=Hof] \\ 6 \text{ TIERCES} & [=Tiers] \end{array} \right.$

^d The Grecian "Aεεεα was $\frac{1}{2}$ of the Πλίθρον.

^e Actus is the length of one furrow, so far as a plough goes before it turns, in length 120 feet.

^f The Jugerum was divided, like the As, into twelve parts.

$$\text{TUN} = \begin{cases} 8 \text{ BARRELS} & [= \text{Bark}] \\ 14 \text{ R-undlets} & [= \text{Raf}] \\ 252 \text{ GALLONS} & [= \text{Galdud}] \\ 2016 \text{ PINTS} & [= \text{Pidzas}] \\ 58212 \text{ Solid INCHES} & [= \text{Inukdad}] \end{cases}$$

$$\text{Tun} = \text{Be} = \text{Put} = \text{Hof} = \text{Tiers} = \text{Bark} = \text{Raf} = \text{Galdud} \\ = \text{Pidzas} = \text{Inukdad}.$$

English Corn Measure.

$$\text{QUARTER} = \text{Bushels } 8 \text{ [Quar} = \text{Busk]}$$

$$\text{BUSHEL} = \begin{cases} 4 \text{ PECKS} & [= \text{Peco}] \\ 8 \text{ GALLONS} & [= \text{Galk}] \\ 64 \text{ PINTS} & [= \text{Pinso}] \end{cases}$$

$$\text{Bush} = \text{Peco} = \text{Galk} = \text{Pinso} : \text{Quar} = \text{Busk}.$$

| | | Cubic Inches. |
|---------------------|-------------------------|-------------------|
| GALLON of W-ine | [GállW = eta] | 231 |
| 8 GALLON of C-orn | [GalC = doid ,ro] | 272 $\frac{1}{4}$ |
| PINT DRY measure | [Pin-dr = if ,rid] | 34 $\frac{1}{8}$ |
| PINT LIQUID measure | [Pin-liquid = ek ,prei] | 28 $\frac{7}{8}$ |

$$\text{Hogshead} = \begin{cases} 63 \text{ GALLONS} & [= \text{Galsi}] \\ 504 \text{ PINTS} & [= \text{Pinúzo}] \end{cases}$$

$$\text{GállW} = \text{eta}, \text{ GalC} = \text{doid ,ro}, \text{ Pin-dr} = \text{if ,rid}, \text{ Pin-liquid} = \text{ek ,prei}.$$

$$\text{Hog} = \text{Galsi-Pinúzo}.$$

Grecian Measures of Capacity.

$$\begin{aligned} \text{Μετ-ρηλῆς} &= \begin{cases} 12 \text{ X-όες} & [= \text{Xád}] \\ 72 \text{ Ζ-έσαι} & [= \text{Zoid}] \\ 144 \text{ Κοτύλ-αι} & [= \text{Κοτύλαff}] \end{cases} \\ \text{Μέδ-ιμνος} &= \begin{cases} 48 \text{ Χοιν-ικῆς} & [= \text{Χοινοk}] \\ 72 \text{ Ζέει-αι} & [= \text{Ζέειpe}] \\ 144 \text{ Κοτύλ-αι} & [= \text{Κοτύλαff}] \end{cases} \end{aligned}$$

8 This is the common received content of a corn gallon, and according to which the following computations are made; but strictly, by Act of Parliament, the corn gallon contains but 268 ,8 cubic inches. By experiment it appears also, that the standard wine gallon doth contain but 224 cubic inches.—See Ward's Mathematician's Guide, Part I. Chap. 3.

Μετ = Χάδ = Ξοιδ = Κοτύλαff, Μείδ = Χοινok = Ξέσρεque
= Κοτύλαff.

$$\Xi\epsilon\varsigma\text{-}\eta\varsigma = \left\{ \begin{array}{ll} 2 \text{ Κοτύλ-αι} & [= \text{Κοτύλε}] \\ 8 \text{ 'Οξύ-βαφα} & [= \text{'Οξύκ}] \\ 12 \text{ Κύαθ-οι} & [= \text{Κύαθbe}] \\ 48 \text{ Μύσε-α} & [= \text{Μύσεok}] \\ 120 \text{ Κοχλ-ιάρια} & [= \text{Κοχladz}] \end{array} \right.$$

Ξέσ = Κοτύλε = Κοχladz = 'Οξύκ = Κύαθbeque = Μύσεok.

| | | Ξέσ-αι | |
|---------------------------------------|---|--------|---------------|
| ^h Μετ-ρητής 1. (= 12 Χόες) | = | 72 | Μετ-Ξέσoid |
| Χῆς 1. (= 12 Κοτύλαι) | = | 6 | Χῆς = Ξau |
| Μέδιμ-νος d. | = | 72 | Μέδιμ = Ξοιδ |
| Χοῖν-ιξ d. | = | 1½ | Χοῖν = Ξa, re |

| | | Μύσεα | |
|------------------------|---|-------|--------------|
| Ξέσ-ης (= 12 Κύαθοι) | = | 48 | Ξέσ = Μύσεok |
| Κοτύ-λη (= 6 Κύαθοι) | = | 24 | Κοτύ-Mef |
| 'Οξύ-αφον (= 3 Κόγχαι) | = | 6 | 'Οξύ = Mau |
| Κύα-θος (= 5 Χῆμαι) | = | 4 | Κύα = Mo |
| Κόγχ-η (= 5 Κοχλιάρια) | = | 2 | Κόγχ-Me |

Μετ = Ξέσoid, Χῆς = Ξau, Μέδιμ = Ξοιδ, Χοῖν = Ξa, re.

Ξέσ = Μύσεok, Κοτύ = Mef, 'Οξύ = Mau, Κύα = Mo, Κόγχ
= Me.

Roman Measures of Capacity.

| | | | |
|-------------|---|-------------|--------------|
| CULEUS = | { | 20 AMPHORÆ | [= Amphex] |
| | | 40 URNÆ | [= Urnoz] |
| | | 860 CONGIÏ | [= Congbauz] |
| SEXTARIUS = | { | 2 HEMINÆ | [= Hemine] |
| | | 4 QUARTARIÏ | [= Quartarf] |
| | | 8 ACETABULA | [= Acetak] |
| | | 12 CYATHI | [= Cyathbe] |
| | | 48 LIGULÆ | [= Liglok] |

Cul = Amphex = Urnoz = Congbauz

Sext = Hemine = Quartarf = Acetak = Cyathbeque
= Liglok.

^h Called also 'Αμφορεύς, and Κάδος.

N. B. l. denotes measures for liquid things, d. measures for dry things, the rest are used as measures for both.

| | SEXTARII | |
|--|----------|--------------|
| CULEUS l. (=20 Amphoræ) | = 960 | Cul=Sexnauz |
| AMPHORA l. (= 2 Urnæ) | = 48 | Amph=Sok |
| URNA l. (=4 Congii) | = 24 | Urn=Sextef |
| CONGIUS l. | = 6 | Congi=Sau |
| MODIUS d. (=2 Semi-modii) | = 16 | Mod=Sas |
| | LIGULÆ | |
| SEXTARIUS (=2 Heminae) | = 43 | Sext=Ligulok |
| HEMINA (=2 Quartarii) | = 24 | Hemi=Lef |
| QUARTARIUS (=2 Acetabula) | = 12 | Quart=Lad |
| ACETABULUM (=1½ Cyathus) | = 6 | Acetab=Lau |
| CYATHUS | = 4 | Cyath=Lo |
| Cul=Sexnauz, Amph=Sok, Urn=Sextef, Congi=Sau, Mod=Sas. | | |
| Sext=Ligulok, Hemi=Lef, Quart=Lad, Acetab=Lau, Cyath=Lo. | | |

Jewish Measures of Capacity.

| | | | |
|--------|---|-------------|--------------|
| BATH = | { | 3 SEABS | [=Seat] |
| | | 6 HINS | [=Hins] |
| | | 10 OMERS | [=Omeraz] |
| | | 18 C-abs | [=Cak] |
| | | 72 LOGS | [=Logpe] |
| | | 96 CAPHS | [=Caphnau] |
| | | 330 GACHALS | [=Gachaltiz] |

Bath=Seat=Hins=Omeraz=Cak=Logpe=Caphnau
=Gachaltiz.

| | BATHS OR EPHAHS | |
|------------------------|-----------------|-----------------|
| CHOMER or <i>Coron</i> | = 10 | Chom=Bath-Ephaz |
| LETECH d. | = 5 | Let=Ephu |

| | CABS | |
|------------------|------|----------------|
| BATH or EPHAH | = 18 | Bath-Eph=Cabak |
| Hin l. ½ of Seah | = 3 | Hin=Cabi |
| SEAH | = 6 | Seah=Cabs |

The HIN was = 12 L-ogs=16 C-aphs l. [Hin=Lad
=Cas]

CAB=20 G-achals d. [Cab=Gez]

Omer or Gomer was a dry measure.

Chom = Bath = Ephaz, Let = Ephu : Bath-Eph = Cabak,
 Hín = Cabi, Sea = Cabs. ()
 Hín = Lad = Cas. Cab = Gez ———

The Memorial Lines.

Tun = Be = Put = Hof = Tiers = Bark = Raf = Galdud =
 Pidzas = Inukdad.

Bush = Peco = Galk = Pinso : Quar = Busk : Hog =
 Galsi = Pinúzo.

GállW = eta, GalC = doid ,ro, Pin-dr = if ,rid, Pin-
 liquid = ek ,prei.

Mετ = Xád = Zoid = Κοτύλαff, Μέδ = Χοινok = Ξέσπεque =
 Κοτύλαff.

Ξέσ = Κοτύλε = Κοχladz = 'Οξύk = Κυάθbeque = Μυσροk.

Mετ = Ξέσoid, Xξς = Ξau, Μέδιμ = Zoid, Χοϊν = Ξa, re.

Ξέσ = Μύσροk, Κοτύ = Mef, 'Οξύς = Mau, Κύα = Mo, Κόγk
 = Me.

Cul = Amphez = Urnoz = Congbauz ———

Sext = Hemine = Quartarf = Acetak = Cyathbeque =
 Liglok.

Cul = Sexnauz, Amph = Sok, Urn = Sextef, Congi =
 Sau, Mod = Sas.

Sext = Ligulok, Hemi = Lef, Quart = Lad, Acetab =
 Lau, Cyath = Lo.

Bath = Seat = Hins = Omeraz = Cak = Logpe = Caphnau
 = Gachaltiz.

Chom = Bath-Ephaz, Let = Ephu : Bath-Eph = Cabak,
 Hín = Cabi, Sea = Cabs.

Hín = Lad = Cas. Cab = Gez.

TABLE VI.

Measures of Capacity reduced to English Measures.

| | | | |
|---------------|---|----------|----------------|
| A PINT DRY | = | 34 ,0312 | } Cubic inches |
| A PINT LIQUID | = | 28 ,875 | |

———— Pin-dr = if ,zibe, Pin-liquid = ek ,koil.

DRY.

| | Pints. | Inches. | Decim. |
|--------------------------------------|--------|---------|--------|
| ⁱ Μέδιον-Θ [Μέδιον=οιζ-τ] | 70 | 03 | ,501 |
| MODIUS [Modi=bau-p] | 16 | 07 | ,68 |
| EPHAB [Eph=ub-ad] | 51 | 12 | ,107 |
| Ξέσ-ης [Ξέσ=z-it] | 00 | 33 | ,158 |
| SEXTARIUS [Sextar=a] | 01 | 00 | ,48 |
| CAB [Cab=d-ek] | 02 | 28 | ,432 |

LIQUID.

| | ints. | Inches. | Decim. |
|---------------------------------------|----------|---------|--------|
| ^k Μετρη-της [Μετρη=eid-an] | 82 | 19 | ,626 |
| AMPHORA [Am=up-az] | 57 | 10 | ,66 |
| ⁱ BATH [Bath=sy-bu] | 60 | 15 | ,2 |
| Ξέσ-ης [Ξέσ=a-f] | 01 | 04 | ,283 |
| SEXTARIUS [Sext=a-u] | 01 | 05 | ,636 |
| ⁱ LOG [Log=z-do] | 00 | 24 | ,2735 |
| | Bushels. | Decim. | |
| Μέδ-ιον-Θ [Μέδ=a-zous] | 1 | ,09612 | |
| MODIUS [Mod=,elild] | 0 | ,253525 | |
| EPHAB } [Eph=,kydoli] | 0 | ,802433 | |
| Chomer } | | | |
| | Gallons. | Decim. | |
| Μετρη-της [Μετρη=az ,til] | 10 | ,335 | |
| AMPHORA [Amph=oi ,apad] | 7 | ,1712 | |
| BATH [Bath=p ,laul] | 7 | ,5658 | |
| CONGIUS [Con=,kousteil] | 0 | ,896385 | |
| | Pints. | Decim. | |
| Ξέσ-ης liquid [Ξέσ=a ,bok] | 1 | ,1483 | |
| Ξέ-της dry [Ξέ=z ,noif] | 0 | ,97447 | |

ⁱ Besides the Attic Medimnus, there was a *Medimnus Georgicus*, equal to 6 Roman *Modii*.

^k The Metretes of Syria was equal to the Roman *Congius* = 7,171 pints.

ⁱ The Jewish measures are here, according to Bishop Cumberland, from the Rabbins: but Bishop Hooper, from Josephus, makes the Jewish Bath equal to the Attic *Μετρητης*, and consequently the Log equal to the *Ξέσης*. Dr. Arbuthnot has given us tables according to both, but seems to prefer Bishop Hooper's account to the other.

| | Pints. Decim. |
|--|---------------|
| SEXTarius liquid [Sext= <i>á</i> , <i>boulak</i>] | 1 ,19518 |
| SEXTarius dry [Sext= <i>a</i> , <i>zafei</i>] | 1 ,0148 |
| CAB liquid [Cab= <i>t</i> , <i>isd</i>] | 3 ,36257 |
| CAB dry [Cab= <i>e</i> , <i>kóp</i>] | 2 ,84731 |
| LOG [Log= <i>z</i> , <i>eif</i>] | 0 ,84065 |

The Memorial Lines.

————— Pin-dr=*if*, *zibe*, Pin-liquid=*ek-koil*.
Μέδμν = *oiz-t*, *Modi*=*bau-p*, *Eph*=*ub-ad*, *Ξίς*=*z-it*,
Sextar=*a*, *Cab*=*d-ek*.
Bath=*sy-bu*, *Μετ*=*eid-an*, *Am*=*up-az*, *Ξίς*=*a-f*,
Sext=*a-u*, *Log*=*z-do*.
Eph=*,kydoti*, *Mod*=*,elild*, *Μέδ*=*a*, *zous*: *Ξί*=*z*, *noif*,
Cab=*e*, *kópque*.
Amph=*oi*, *apad*, *Bath*=*p*, *laul*, *Μετ*=*az*, *til*: *Ξίς*
= *a*, *bok*, *Cab*=*t*, *isd*,
Sext=*á*, *boulak*: *Con*=*,kousteil*: *Sext*=*a*, *zafei*, *Log*
= *z*, *eif*.

TABLE VII.

Weights.

N. B. L or Li stands for *Libra* or pound, *Oz.* for ounce, *Lit* Pound *T-roy*, *L-aver* Pound *Averdupois*.

A Pound *T-roy*=12 ounces [*Lít*=*Ozad*]

An Ounce *Troy*= $\left\{ \begin{array}{l} 8 \text{ DRAMS [=Drák]} \\ 24 \text{ SCRUPLES [=Scref]} \\ 20 \text{ P-enny weights [=Pez]} \\ 480 \text{ GRAINS [=Grafky]} \end{array} \right.$

^m A Pound *Averdupois* = $\left\{ \begin{array}{l} 16 \text{ Ounces [=Ozas]} \\ 256 \text{ DRAMS [=Drels]} \end{array} \right.$

Lít=*Ozad*, *Oz*=*Drák*=*Scref*=*Pez*=*Grafky*. *Láv*=*Ozas*, *Láv*=*Drels*.

^m According to the proportion laid down by Mr. Greaves, viz. that the averdupois pound is to the troy pound as 175 to 144: in Dr. Arbuthnot's tables it is as 17 to 14, which is a very considerable difference, being but $4\frac{2}{7}$ grains less in the pound.

| | Grains Troy. |
|--|--------------|
| Pound T-roy [Lit=Grupauz] | 5760 |
| Ounce Troy [Oz=oky] | 480 |
| DRAIN [Dr=auz] | 60 |
| Penny-weight [Pen=gref] | 24 |
| SCRUPLE [Scrup=dy] | 20 |
| ⁿ Pound AVerdupois [Lav=oi th] | 7000 |
| Ounce AVerdupois [OzAv=otoi,l] | 437 ,5 |
| Lit=Grupauz, Oz=oky, Di=auz, Pen=gref, Scrup=dy, Lav=oi th que, | |
| OzAv=otoi,l————— | |

Ancient Weights.

| | | | |
|---|---|--------------|-----------|
| Attic talent = | { | 60 M-inas | [=Mauz] |
| | | 6000 Drachms | [=Drauth] |
| Hebrew talent= | { | 3000 Shekels | [=Shith] |
| | | 60 M-anehs | [=Mauz] |
| SHEKEL = | { | 2 BEKAHS | [=Beke] |
| | | 4 ZUZAS | [=Zuf] |
| | | 20 G-erahs | [=Gez] |
| AT=Mauz=Drauth: Het = Shith: Het = pond = | | | |
| Mauz: Shek=Beke=Zuf=Gez. | | | |

Roman and Grecian lesser Weights.

| | | | |
|---|-----|----------------------------|-----------------------|
| LIBRA | = | 12 UNCIÆ | [Lib=Unad] |
| UNCIA | = { | 3 DUELLÆ | [=Duel ^t] |
| | | 4 SICILICI | [=Sicilo] |
| | | 6 SEXTULÆ | [=Ses] |
| | | 8 DRACHMÆ | [=Drak] |
| DRACHMA | = { | 8 SCRIPTULA | [=Script] |
| | | 6 OBOLI | [=Obs] |
| | | 18 SILIQUÆ | [=Silak] |
| | | 72 GRANA <i>vel</i> LENTES | [=Groid] |
| Lib=Unad————— | | | |
| Un=Duel ^t = Sicilo= Ses= Drak: Drach=Script= | | | |
| Silak=Obs=Groid. | | | |

ⁿ Mr. Ward says, that, by a very nice experiment, he found that one pound averdupois is equal to 14 ounces 11 penny-weights and $15\frac{1}{2}$ grains troy, which is 6999 $\frac{1}{2}$ grains; differing but half a grain in the pound from Mr. Greaves. *Mathematician's Guide*, part i. chap. 3.

| | |
|---|----------------|
| | GRANA Σιτάρια. |
| LIBRA Λίτρα [Lib=grasnad] | 6912 |
| UNCIA Ούγγια [Unc=lois] | 576 |
| ⁿ DRACHMA Δραχμή [Drachm=oid] | 72 |
| SCRUPULUM Γράμμα [Scrupul=ef] | 24 |
| • OBOLUS Ὄβολος [Obol=ad] | 12 |
| SILIQUA Κεράτιον [Sil=f] | 4 |
| Lib=grasnad, Unc=lois, Drachm=oid, Scrupul=ef, Obol=ad, Sil=f. | |

Divisio Assis.

| | Unc. | | Unc. |
|---------|------|----------|------|
| AS | 12 | SEMIS | 6 |
| DEUNX | 11 | QUINCUNX | 5 |
| DEXTANS | 10 | TRIENS | 4 |
| DODRANS | 9 | QUADRANS | 3 |
| BES | 8 | SEXTANS | 2 |
| SEPTUNX | 7 | UNCIA | 1 |

As = dēu-dex—dod-bes—septún-semi—quin-tri-qua
—sext-unc.

The Memorial Lines.

LÍT=Ozad. Oz=Drák=Scref=Pez=Grafky. Láv
= Ozas, Láv=Drels.

LIT=Grupauz, Oz=oky, Dr=auz, Pen=gref, Scrup
=dy, Lav=oithque,

OzAv=otoi,l————

AT=Mauz=Drauth: Her=Shith: Her-pond=Mauz:
Shek=Beke=Zuf=Gez.

Lib=Unad————

Un = Duelt = Sicilo=Ses = Drak: Drach = Script=
Silak=Obs=Groid.

ⁿ N.B. The Romans divided their ounce into 7 denarii as well as 8 drachms; and since they reckoned their denarius equal to the Attic drachm, this will make the Attic weights $\frac{1}{8}$ heavier than the correspondent Roman weights.

° The Ὄβολος was divided into 6 Καλ-κοὶ or *Æreoli*, and the Χαλκός into 7 Λεπτ-α or *Minuta*. [° Ὄς=Χαλς, Χαλκ=Λεπτοι.]

The Ἡμίωβολον, Ἡμίδραχμον, Δίδραχμον, &c. are evident from their names.

Lib=grasnad, Unc=lois, Drachm=oid, Scrupul=ef,
 Obol=ad, Sil=f.
 As = dēu-dex—dod-bes—septún-semi—quin-tri-qua
 —sext-unc.

TABLE VIII.

Ancient Weights reduced to English Troy Weights.

| | Troy Grains. Decim. |
|--|---------------------|
| ROMAN Ounce Rom-oz= <i>filk</i>] | 438 ,00 |
| SHEKEL [<i>Shek=ebou</i>] | 219 ,00 |
| ^p ROMAN D-rachm [<i>ROD=uf ,pu</i>] | 54 ,75 |
| DENARIUS [<i>Dēn=sé, loi</i>] | 62 ,57 |
| ^a ATTIC D-rachm [<i>AD=sei ,f</i>] | 68 ,4 |

| | lib. | oz. | p-w. | gr. |
|---|------|-----|------|-----|
| ROMAN L-ibra [<i>ROL=az-an</i>] | 10 | 19 | 00 | |
| HEBREW M-aneh [<i>HEM=e-t-oi-be</i>] | 62 | 03 | 07 | 12 |
| HEBREW T-alent [<i>HEt=báf-yz-al</i>] | 114 | 00 | 15 | 00 |
| ^r ANCIENT ATTIC M-ina [<i>AtM=a-d-u</i>] | 01 | 02 | 05 | 00 |
| ANCIENT ATTIC T-alent [<i>AtT=pa-t</i>] | 71 | 03 | 00 | 00 |

^p So Bishop Cumberland, from the Rabbinical accounts. But Bishop Hooper, from Philo and Josephus, makes it equal to the Attic *Stater*, or *Tetradrachm* = 68 ,4 + 4, or 67 + 4 grains.

^q According to the weight of the standard mina of Solon, Bishop Hooper supposes, that whilst the money drachm fell gradually from 68 ,4 to 62 ,57 grains, the ponderal drachm continued still the same, which I have therefore here retained. Dr. Bernard lays the middle sort of Attic drachms at 66 grains, which (Table I.) are accordingly valued at 8*d.*¼. But the weight of the Attic drachm, under the first Roman Emperors, and for some considerable time before, was about 62 ,57 grains; and upon this drachm, and the equality of it with the Roman denarius, most of the computations in classic authors are founded.

^t The common Attic mina was supposed equal to 12½ Roman ounces. The mina medica was 16 Roman ounces, and exactly the weight of our averdupois pound.

The Memorial Lines.

Rom-oz=*fik*, Shek=*ebou*, Rod=*uf, pu*, Den=*sc, loi*,
 AD=*sei, f*.

HET = *báf-yz-al*, RoL = *az-an*, Hem = *e-t-oi-be*, Atm
 = *a-d-u*, Atr=*pa-t*.

TABLE IX.

*Jewish and Roman Money, according to Bishop
 Cumberland.*

| | l. | s. | d. |
|---|------|----|------------------|
| HEBREW M-ina [Hem= <i>p-a-l</i>] | 7 | 01 | 05 |
| HEBREW T-alent [Het= <i>tút-ab-az-h</i>] | 353 | 11 | 10 $\frac{1}{2}$ |
| GOLDEN DARICK=12 G-erachs [Dar = <i>Gád=la-do</i>] | 1 | 00 | 04 |
| HEBREW T-alent of gold (Or) [He- TO= <i>ufoil-ba-p-h</i>] | 5475 | 11 | 07 $\frac{1}{2}$ |
| SHEKEL [Shek= <i>sé-do,ro</i>] | | 02 | 04 $\frac{1}{4}$ |
| SILVER DENARIUS [Den= <i>doi-t</i>] | | 00 | 07 $\frac{1}{4}$ |
| ASSARIUM F-arthing and half [Assar= <i>Fah</i>] | | | |
| A QUADRANT $\frac{3}{4}$ of a farthing [Quád= <i>iro</i>] | | | |
| A MITE $\frac{1}{8}$ of a F-arthing [Mit= <i>riF</i>] | | | |

The Memorial Lines.

Hem = *p-a-l*, Het = *tút-ab-az-h*, Dar = *Gád = la-do*,
 HetO = *ufoil-ba-p-h*.

Shek = *sé-do,ro*, Den = *doi-t*, Assar = *Fah*, Quád = *iro*,
 Mit = *riF*.

Decimal Tables for the more easy Reduction of ancient Coins, Weights, and Measures.

Those who understand decimal arithmetic will, I hope, excuse me, if, for the sake of such as are unacquainted therewith, I lay down two or three observations, in order to make the following tables more generally useful:

First, that the denominator of every decimal fraction is an unit, with as many cyphers as there are places of numbers in the fraction: thus ,5 signifies $\frac{5}{10}$, 05 signifies $\frac{5}{100}$, 005 signifies $\frac{5}{1000}$, &c.

Secondly, that the nine figures at the left hand of each of the tables may stand either for units, or, by the supposed addition of one, two, three, or more cyphers, for tens, hundreds, thousands, &c.

Thirdly, that if the said nine figures are supposed to stand for one, two, three, four, &c. then the decimals stand as in the table: if for ten, twenty, thirty, forty, &c. or for one hundred, two hundred, &c. then, for every such supposed addition of a cypher, one figure in the place of decimals is to be added to the place of integers.

Thus a Jewish cubit is equal to 1 English foot, and 824 thousandth parts of a foot.

| | | Feet decim. |
|-------------|---|-------------|
| 1 cubit | = | 1 ,824 |
| 10 cubits | = | 18 ,24 |
| 100 cubits | = | 182 ,4 |
| 1000 cubits | = | 1824 |

If there are not places enough of decimals to answer, they must be supplied with cyphers:

| | | Lib. decim. |
|----------------------|---|-------------|
| Thus, 1 Attic talent | = | 206 ,25 |
| 10 Attic talents | = | 2062 ,5 |
| 100 Attic talents | = | 20625 |
| 1000 Attic talents | = | 206250 &c. |

But as the common computation in classic authors is by sesterces and drachms, I shall exemplify more particularly the foregoing observations in the two tables drawn up for them.

Sesterce = $1d. 3f. \frac{3}{4}$
 in decimal fractions
 of a pound sterling
 = ,00807291667
 [Sest = *zykypenasso*]

A-ttic D-rachm, or
 Roman denarius,
 = $7d. 3f.$ in deci-
 mal fractions of a
 pound sterling
 = ,032291667
 [Ad = *zidenasso*]

| 1 Sestertius. | Decem Sestertii or Nummi. | Centum Sestertii. | Sestertium, or 1000 HS. | Decem Sestertia, or 10000 HS. | Centum Sestertia, or 100000 HS. | Decies Sestertium, or 1 Million HS. | Centies Sestertium, or 10 Millions HS. | Millies Sestertium, or 100 Millions HS. | Decies Millies, or 1000 Millions HS. | Centies Millies, or 10000 Millions HS. | Millies Millies, or 100000 Millions HS. |
|---------------|---------------------------|-------------------|-------------------------|-------------------------------|---------------------------------|-------------------------------------|--|---|--------------------------------------|--|---|
| 1 | ,00807291667 | | | | | | | | | | |
| 2 | ,01614583333 | | | | | | | | | | |
| 3 | ,02421875000 | | | | | | | | | | |
| 4 | ,03229166667 | | | | | | | | | | |
| 5 | ,04036458333 | | | | | | | | | | |
| 6 | ,04843750000 | | | | | | | | | | |
| 7 | ,05651041667 | | | | | | | | | | |
| 8 | ,06458333333 | | | | | | | | | | |
| 9 | ,07265625000 | | | | | | | | | | |

| 1 Drachm. | 10 Drachms. | 100 Drachms, or 1 Mina. | 1000 Drachms, or 10 Minæ. | 1 Myriad (= 10000 Dr.) or 100 Minæ. | 10 Myriads (= 10000 Dr.) or 1000 Minæ. | 100 Myriads (= 1 Million Dr.) or 10000 Minæ. | 1000 Myriads (= 10 Mill. Dr.) or 100000 Minæ. | 10000 Myriads of Drachms, or Myr. of Myriads. | 10 Myriads of Myriads of Drachms. |
|-----------|-------------|-------------------------|---------------------------|-------------------------------------|--|--|---|---|-----------------------------------|
| 1 | ,032291667 | | | | | | | | |
| 2 | ,064583333 | | | | | | | | |
| 3 | ,096875000 | | | | | | | | |
| 4 | ,129166667 | | | | | | | | |
| 5 | ,161458333 | | | | | | | | |
| 6 | ,193750000 | | | | | | | | |
| 7 | ,226041667 | | | | | | | | |
| 8 | ,258333333 | | | | | | | | |
| 9 | ,290625000 | | | | | | | | |

According to the observations before laid down, it is evident that

| | Lib. | Decim. |
|---------------------------|------|---------------|
| 1 Sestertium, or 1000 HS. | = | 008 ,07291667 |
| 2 Sestertia, or 2000 HS. | = | 016 ,14583333 |
| 3 Sestertia, or 3000 HS. | = | 024 ,21875 |

And so down to 9 sestertia; the three first figures of the table being integers, the rest decimals. So,

| | | Lib. | Decim. |
|--|---|-------|---------|
| ^s Decies Sestertium, or 1 Mill. HS. | = | 8072 | ,91667 |
| Vicies, or 2 Million HS. | = | 16145 | ,83333 |
| Tricies, or 3 Million HS. | = | 24218 | ,75 &c. |

Hence the value of most of the sums mentioned in classic authors may be discovered from the tables at first sight; the rest by the help only of addition. Thus,

What is the Value of the Centies Quinquagies HS?

| | | Lib. | Decim. |
|---------------------|---|--------|--------|
| Centies HS | = | 80729 | ,1667 |
| Quinquagies | = | 40364 | ,5833 |
| Centies Quinquagies | = | 121093 | ,75 |

What is the Value of 375 Attic Drachms?

| | | | |
|-------------|---|----|-----------|
| 300 Drachms | = | 9 | ,6875 |
| 70 Drachms | = | 2 | ,26041667 |
| 5 Drachms | = | 0 | ,16145833 |
| 375 Drachms | = | 12 | ,109375 |

What is the Value of 51 Myriads of Drachms?

| | | | |
|------------|---|-------|--------|
| 50 Myriads | = | 16145 | ,83333 |
| 1 Myriad | = | 322 | ,91667 |
| 51 Myriads | = | 16468 | ,75 |

Note, That the table for drachms or denarii, will also serve for minæ and for asses, remembering that a denarius is equal to 10 asses, and a mina to 100 drachms. Thus,

^s With the numeral adverb, *Centena Millia* are always understood.

| | |
|--|-------------|
| Æris (sc. Assium) Millia X = 1000 } denarii | Lib. Decim. |
| Æris Millia XXV = 2500 denarii = | 32 ,291667 |
| Æris Millia LXXV = 7500 denarii = | 80 ,72916 |
| | 242 ,1875 |

What has been already said will easily be applied to those which follow :

| ^t Attic drachm = 8d. $\frac{3}{4}$ | ^t Attic talent = 206l. 5s. | ^u Attic talent = 193l. 15s. |
|--|--|---|
| <i>l. decim.</i> | <i>l. decim.</i> | <i>l. decim.</i> |
| 1 ,034375 | 1 206 ,25 | 1 193 ,75 |
| 2 ,068750 | 2 412 ,50 | 2 387 ,50 |
| 3 ,103125 | 3 618 ,75 | 3 581 ,25 |
| 4 ,137500 | 4 825 ,00 | 4 775 ,00 |
| 5 ,171875 | 5 1031 ,25 | 5 968 ,75 |
| 6 ,206250 | 6 1237 ,50 | 6 1162 ,50 |
| 7 ,240625 | 7 1443 ,75 | 7 1356 ,25 |
| 8 ,275000 | 8 1650 ,00 | 8 1550 ,00 |
| 9 ,309375 | 9 1856 ,25 | 9 1743 ,75 |

| ^x Shekel = 2s. 7d. | ^x Hebrew talent = 387l. 10s. | Heb. tal. gold = 16 tal. silver |
|----------------------------------|--|------------------------------------|
| <i>d ecim.</i> | <i>l. decim.</i> | <i>l.</i> |
| 1 ,129166667 | 1 387 ,5 | 1 6200 |
| 2 ,258333333 | 2 775 ,0 | 2 12400 |
| 3 ,387500000 | 3 1162 ,5 | 3 18600 |
| 4 ,516666666 | 4 1550 ,0 | 4 24800 |
| 5 ,645833333 | 5 1937 ,5 | 5 31000 |
| 6 ,775000000 | 6 2325 ,0 | 6 37200 |
| 7 ,904166666 | 7 2712 ,5 | 7 43400 |
| 8 1,033333333 | 8 3100 ,0 | 8 49600 |
| 9 1,162500000 | 9 3487 ,5 | 9 55800 |

^t According to Dr. Bernard.

^u According to Dr. Arbuthnot.

^x The shekel is here valued equal to 4 Attic drachms, according to Josephus; and this valuation Dr. Arbuthnot has followed in his Dissertations, though his tables are according to Bp. Cumberland. The talent = 3000 shekels.

Grecian Digit

Inch decim.

| | |
|---|-------------|
| 1 | 0 ,75546875 |
| 2 | 1 ,51093750 |
| 3 | 2 ,26640625 |
| 4 | 3 ,02187500 |
| 5 | 3 ,77734375 |
| 6 | 4 ,53281250 |
| 7 | 5 ,28828125 |
| 8 | 6 ,04375000 |
| 9 | 6 ,79921875 |

Roman Digit

Inch decim.

| | |
|---|----------|
| 1 | 0 ,72525 |
| 2 | 1 ,45050 |
| 3 | 2 ,17575 |
| 4 | 2 ,90100 |
| 5 | 3 ,62625 |
| 6 | 4 ,35150 |
| 7 | 5 ,07675 |
| 8 | 5 ,80200 |
| 9 | 6 ,52725 |

Jewish Digit

Inch decim.

| | |
|---|--------|
| 1 | 0 ,912 |
| 2 | 1 ,824 |
| 3 | 2 ,736 |
| 4 | 3 ,648 |
| 5 | 4 ,560 |
| 6 | 5 ,472 |
| 7 | 6 ,384 |
| 8 | 7 ,296 |
| 9 | 8 ,208 |

Grecian Foot

Feet decim.

| | |
|---|----------|
| 1 | 1 ,00729 |
| 2 | 2 ,01458 |
| 3 | 3 ,02187 |
| 4 | 4 ,02916 |
| 5 | 5 ,03645 |
| 6 | 6 ,04375 |
| 7 | 7 ,05104 |
| 8 | 8 ,05833 |
| 9 | 9 ,06562 |

Roman Foot

Feet decim.

| | |
|---|--------|
| 1 | 0 ,967 |
| 2 | 1 ,934 |
| 3 | 2 ,901 |
| 4 | 3 ,868 |
| 5 | 4 ,835 |
| 6 | 5 ,802 |
| 7 | 6 ,769 |
| 8 | 7 ,736 |
| 9 | 8 ,703 |

Jewish Cubit

Feet decim.

| | |
|---|---------|
| 1 | 1 ,524 |
| 2 | 3 ,648 |
| 3 | 5 ,472 |
| 4 | 7 ,296 |
| 5 | 9 ,120 |
| 6 | 11 ,944 |
| 7 | 12 ,768 |
| 8 | 14 ,592 |
| 9 | 16 ,416 |

Roman Mile

Mile decim.

| | |
|---|-----------|
| 1 | 0 ,915719 |
| 2 | 1 ,831438 |
| 3 | 2 ,747157 |
| 4 | 3 ,662876 |
| 5 | 4 ,578595 |
| 6 | 5 ,494314 |
| 7 | 6 ,410033 |
| 8 | 7 ,325752 |
| 9 | 8 ,241471 |

Jewish Mile

Mile decim.

| | |
|---|----------|
| 1 | 1 ,3817 |
| 2 | 2 ,7634 |
| 3 | 4 ,1451 |
| 4 | 5 ,5268 |
| 5 | 6 ,9085 |
| 6 | 8 ,2902 |
| 7 | 9 ,6719 |
| 8 | 11 ,0536 |
| 9 | 12 ,4353 |

Roman Sq. Foot

Sq. Feet decim.

| | |
|---|-----------|
| 1 | 0 ,935089 |
| 2 | 1 ,870178 |
| 3 | 2 ,805267 |
| 4 | 3 ,740356 |
| 5 | 4 ,675445 |
| 6 | 5 ,610534 |
| 7 | 6 ,545623 |
| 8 | 7 ,480712 |
| 9 | 8 ,415801 |

| Grecian Sq. Foot | | Πλάγιον | | Jugerum | |
|------------------|------------|-------------|-----------|-------------|----------|
| Sq. Feet decim. | | Acre decim. | | Acre decim. | |
| 1 | 1 ,0146365 | 1 | 0 ,230632 | 1 | 0 ,61824 |
| 2 | 2 ,0292730 | 2 | 0 ,461264 | 2 | 1 ,23648 |
| 3 | 3 ,0439095 | 3 | 0 ,691896 | 3 | 1 ,85472 |
| 4 | 4 ,0585460 | 4 | 0 ,922528 | 4 | 2 ,47296 |
| 5 | 5 ,0731825 | 5 | 1 ,153160 | 5 | 3 ,09120 |
| 6 | 6 ,0878190 | 6 | 1 ,383792 | 6 | 3 ,71944 |
| 7 | 7 ,1024555 | 7 | 1 ,614424 | 7 | 4 ,32768 |
| 8 | 8 ,1170920 | 8 | 1 ,845056 | 8 | 4 ,94592 |
| 9 | 9 ,1317285 | 9 | 2 ,075688 | 9 | 5 ,56416 |

| Egyptian "Aqqa" | | Σίγαι dry | | Sextarius dry | |
|-----------------|-----------|-------------|----------|---------------|---------|
| Acre decim. | | Pint decim. | | Pint decim. | |
| 1 | 0 ,763768 | 1 | 0 ,97447 | 1 | 1 ,0148 |
| 2 | 1 ,527536 | 2 | 1 ,94894 | 2 | 2 ,0296 |
| 3 | 2 ,291304 | 3 | 2 ,92341 | 3 | 3 ,0444 |
| 4 | 3 ,055072 | 4 | 3 ,89788 | 4 | 4 ,0592 |
| 5 | 3 ,818840 | 5 | 4 ,87235 | 5 | 5 ,0740 |
| 6 | 4 ,582608 | 6 | 5 ,84682 | 6 | 6 ,0888 |
| 7 | 5 ,346376 | 7 | 6 ,82129 | 7 | 7 ,1036 |
| 8 | 6 ,110144 | 8 | 7 ,79576 | 8 | 8 ,1184 |
| 9 | 6 ,873912 | 9 | 8 ,77023 | 9 | 9 ,1332 |

| Cab dry | | Medimnus | | Modius | |
|-------------|-----------|---------------|----------|---------------|-----------|
| Pint decim. | | Bushel decim. | | Bushel decim. | |
| 1 | 3 ,84731 | 1 | 1 ,09612 | 1 | 0 ,253525 |
| 2 | 7 ,69462 | 2 | 2 ,19224 | 2 | 0 ,507050 |
| 3 | 11 ,54193 | 3 | 3 ,28836 | 3 | 0 ,760575 |
| 4 | 15 ,38924 | 4 | 4 ,38448 | 4 | 1 ,014100 |
| 5 | 19 ,23655 | 5 | 5 ,48060 | 5 | 1 ,267625 |
| 6 | 23 ,08386 | 6 | 6 ,57672 | 6 | 1 ,521150 |
| 7 | 26 ,93117 | 7 | 7 ,67284 | 7 | 1 ,774675 |
| 8 | 30 ,77848 | 8 | 8 ,76896 | 8 | 2 ,028200 |
| 9 | 34 ,62579 | 9 | 9 ,86508 | 9 | 2 ,281725 |

| Ephah. Bushel decim. | | Æîns liquid Pints decim. | | Sextarius liquid Pints decim. | |
|-------------------------|------------------------|-----------------------------|----------|----------------------------------|-----------|
| 1 | 0 ,802433 ^y | 1 | 1 ,1483 | 1 | 1 ,19518 |
| 2 | 1 ,604867 | 2 | 2 ,2966 | 2 | 2 ,39036 |
| 3 | 2 ,407300 | 3 | 3 ,4449 | 3 | 3 ,58554 |
| 4 | 3 ,209734 | 4 | 4 ,5932 | 4 | 4 ,78072 |
| 5 | 4 ,012168 | 5 | 5 ,7415 | 5 | 5 ,97590 |
| 6 | 4 ,814601 | 6 | 6 ,8898 | 6 | 7 ,17108 |
| 7 | 5 ,617035 | 7 | 8 ,0381 | 7 | 8 ,36626 |
| 8 | 6 ,419469 | 8 | 9 ,1864 | 8 | 9 ,56144 |
| 9 | 7 ,221902 | 9 | 10 ,3347 | 9 | 10 ,75662 |

| Cab liquid Pints decim. | | Log Pints decim. | | Amphora Hhds. decim. | |
|----------------------------|-----------|---------------------|----------|-------------------------|-----------|
| 1 | 3 ,36257 | 1 | 0 ,84064 | 1 | 0 ,113821 |
| 2 | 6 ,72514 | 2 | 1 ,68128 | 2 | 0 ,227642 |
| 3 | 10 ,08771 | 3 | 2 ,52192 | 3 | 0 ,341463 |
| 4 | 13 ,45028 | 4 | 3 ,36256 | 4 | 0 ,455284 |
| 5 | 16 ,81285 | 5 | 4 ,20320 | 5 | 0 ,569105 |
| 6 | 20 ,17542 | 6 | 5 ,04384 | 6 | 0 ,682926 |
| 7 | 23 ,53799 | 7 | 5 ,88448 | 7 | 0 ,796747 |
| 8 | 26 ,90056 | 8 | 6 ,72512 | 8 | 0 ,910568 |
| 9 | 30 ,26313 | 9 | 7 ,56576 | 9 | 1 ,024389 |

| Metretes Hhds. decim. | | Bath Hhds. decim. | | Congius ^z Gall. decim. | |
|--------------------------|----------|----------------------|-----------|--------------------------------------|-----------|
| 1 | 0 ,16404 | 1 | 0 ,114858 | 1 | 0 ,896385 |
| 2 | 0 ,32808 | 2 | 0 ,229716 | 2 | 1 ,792770 |
| 3 | 0 ,49212 | 3 | 0 ,344574 | 3 | 2 ,689155 |
| 4 | 0 ,65616 | 4 | 0 ,459432 | 4 | 3 ,585540 |
| 5 | 0 ,82020 | 5 | 0 ,574290 | 5 | 4 ,481925 |
| 6 | 0 ,98424 | 6 | 0 ,689148 | 6 | 5 ,378310 |
| 7 | 1 ,14828 | 7 | 0 ,804006 | 7 | 6 ,274695 |
| 8 | 1 ,31232 | 8 | 0 ,918864 | 8 | 7 ,171080 |
| 9 | 1 ,47636 | 9 | 1 ,033722 | 9 | 8 ,067465 |

^y The exact fraction is, $802433\frac{5}{8}$. In the Jewish measures I have followed Bi-hop Cumberland. The Ephah, according to Josephus, =1 ,0961 bushel, and the Cab=3 ,874 pints; the Cab liquid =4 ,5933 pints, the Log equal to the Attic Æîns, and the Bath equal to the Metretes.

^z Equal to the Metretes of Syria.

Attic Drachm
= 62 ,57 gr.

| | oz. | decim. |
|---|-----|---------|
| 1 | 0 | ,130215 |
| 2 | 0 | ,260430 |
| 3 | 0 | ,390645 |
| 4 | 0 | ,520860 |
| 5 | 0 | ,651075 |
| 6 | 0 | ,781290 |
| 7 | 0 | ,911505 |
| 8 | 1 | ,041720 |
| 9 | 1 | ,171935 |

Shekel
= 4 Att. Drachms

| | oz. | decim. |
|---|-----|--------|
| 1 | 0 | ,52086 |
| 2 | 1 | ,04172 |
| 3 | 1 | ,56258 |
| 4 | 2 | ,08344 |
| 5 | 2 | ,60430 |
| 6 | 3 | ,12516 |
| 7 | 3 | ,64602 |
| 8 | 4 | ,16688 |
| 9 | 4 | ,68774 |

Attic Drachm.
= 62 ,57 gr.

| | Pound Troy | decim. |
|---|------------|-----------|
| 1 | 0 | ,01085125 |
| 2 | 0 | ,02170250 |
| 3 | 0 | ,03255375 |
| 4 | 0 | ,04340500 |
| 5 | 0 | ,05425625 |
| 6 | 0 | ,06510750 |
| 7 | 0 | ,07595875 |
| 8 | 0 | ,08681000 |
| 9 | 0 | ,09766125 |

Shekel
= 219 gr. Troy

| | Po. Troy | decim. |
|---|----------|--------------------------------------|
| 1 | 0 | ,0380208 ¹ / ₃ |
| 2 | 0 | ,0760416 ² / ₃ |
| 3 | 0 | ,1140625 |
| 4 | 0 | ,1520833 ¹ / ₃ |
| 5 | 0 | ,1901041 ² / ₃ |
| 6 | 0 | ,2281250 |
| 7 | 0 | ,2661458 ¹ / ₃ |
| 8 | 0 | ,3041666 ² / ₃ |
| 9 | 0 | ,3421875 |

Shekel
= 4 Att. Drachm

| | Po. Troy | decim. |
|---|----------|---------|
| 1 | 0 | ,043405 |
| 2 | 0 | ,086810 |
| 3 | 0 | ,130215 |
| 4 | 0 | ,173620 |
| 5 | 0 | ,217025 |
| 6 | 0 | ,260430 |
| 7 | 0 | ,303835 |
| 8 | 0 | ,347240 |
| 9 | 0 | ,390645 |

Roman Libra.

| | Po. Troy | decim. |
|---|----------|--------|
| 1 | 0 | ,9125 |
| 2 | 1 | ,8250 |
| 3 | 2 | ,7375 |
| 4 | 3 | ,6500 |
| 5 | 4 | ,5625 |
| 6 | 5 | ,4750 |
| 7 | 6 | ,3875 |
| 8 | 7 | ,3000 |
| 9 | 8 | ,2125 |

MISCELLANEA.

SECTION VI.

The Proportion of the Diameter to the Circumference of a Circle: the Area of a Circle and Ellipsis: the Surface and Solidity of a Sphere.

Diameter : PERIPHERY :: 7 : 22, [Di : peri : : p : ed]
or : : 113 : 355. or more exactly the DIAMETER
: PERIPHERY : : 10.000,000 : 31.414,929.

Di : peri : : p : ed : : bat : ilu : Dia : priph : : azmíl :
ta-fal-oudou.

According to Van Ceulen, who carried the proportion to six and thirty figures, which, in memory of so laborious a work, were engraven upon his tomb at St. Peter's, in Leyden, the diameter : Periphery : : 2 :

| Quintil. | Quadr. | Tril. | Bil. | Mil. | Un. |
|---|--------|-------|------|------|-----|
| 6,28,318.530,717.958,647.692,528.676,655.930,576. | | | | | |

s ,ektak, uiz-pap, nuk-sóp, sne-lek, aúps-sul, ouiz-lois.

The Diameter multiplied by 3 ,1416 gives the PERIPHERY [Diperi ,bobs dat priph], consequently the periphery divided by 3 ,1416 gives the diameter.

The AREA of a circle is given by multiplying the SQUARE of the D-iameter into 0 ,7854.

Datur Area SquaD per y,peilo.

The AREA likewise is given by multiplying the fourth part of the Diameter into the Periphery.

Ar= $\frac{rod + pe}{4}$

The AREA of an ELLIPSIS is given by multiplying the rectangle of the TRANSVERSE and CONJUGATE DIAMETERS into 0,7854.

Area fit Ellips. Dia-tran-con duct. in *y,peilo*.

The SURFACE of a sphere is given by multiplying the PERIPHERY into the D-iameter [$\text{Surf} = \text{pe} + \text{D}$]

The SURFACE of a sphere is also given by multiplying the AREA of its largest circle into 4. [$\text{Surf} = \text{are} + o$]

The SOLIDITY of a SPHERE is given by multiplying $\frac{1}{3}$ of the RADIUS into the SURFACE. [$\text{Sol-sphe} = \text{r} \cdot \text{rad} + \text{sur}$]

The Memorial Lines.

Di : peri : : p : ed : : bat : ilu. Dia : priph : : azmíl : ta-fal-oudou.

s, ektak, uiz-pap, nuk-sóp, sne-lek, aúps-sul, ouiz-lois.

Diperi, bobs dat Priph. datur Arda squad per *y,peilo*.

Area fit Ellips. Dia-tran-con duct. in *y,peilo*.

Ar = $\frac{\text{rodi} + \text{pe}}{2}$. Surf = $\frac{\text{pe} + \text{D}}{2}$, Surf = $\frac{\text{are} + o}{4}$, Sol-sphe = $\frac{\text{r} \cdot \text{rad} + \text{sur}}{3}$.

The Quantity of Vapours raised out of the Sea, estimated by Dr. Halley.

The MEDITERRANEAN, supposed to be equal to 160 square DEGREES, is computed to yield in vapour, per diem, 5280 MILLIONS of T-ons [$\text{Med} = \text{dégbauz} = \text{lekymilt}$]

The THAMES is computed to carry down in a day of 24 hours, into the sea, 20.300,000 TONS [$\text{Tham} = \text{ez igthton}$]

The rivers (FLUVII) which run into the MEDITERRANEAN, are computed to carry 1827.000,000 tons, which is little more than $\frac{1}{3}$ of what is raised in vapour [$\text{Fluv-med} = \text{aképmilt}$]

The Memorial Line.

Med = dégbauz = lekymilt. Tham = ez-igthton. Fluv-med = aképmilt.

The Computations are made thus :

By experiments it appears, that each Square Foot of the surface of water yields in vapour, *per diem*, HALF a wine PINT [Squar=ha-pin]

Each space of four feet square (=16 Square Feet) yields a GALLON [assquar=gal]

A MILE square 6914 TONS [Milsnafton]

A square DEGREE (of $69\frac{1}{2}$ English miles) 33.000,000 tons [Dég (misou) timton]

The Mediterranean = square 160 degrees = 5280.000,000 tons as above.

The Memorial Line.

Squar=ha-pin : assquar=gal : Mil=snafton : Dég (misou) timton.

The Quantity of Water the Mediterranean receives from the Rivers that fall into it, is estimated thus :

The most considerable rivers that run into the Mediterranean are the Ebro, the Rhone, the Tiber, the PO, the Nile, the DON or Tanais, the DANUBE, the NIESTER, the NIEPER or Borysthenes. Each of these is supposed to carry down ten times as much water as the Thames : not that any of them is so great, but so to allow for the small rivers that run into that sea. Now the water of the THAMES being computed at about 20.300,000 tons, as above, the nine rivers aforesaid each will amount to 203.000,000 ; in all, 1827.000,000 T-ons.

The Memorial Line.

Thám=ez-igtht, Eb-Rho-Ti-Po, Nil-Don, Dan-Niest-Nieper-aképinilt.

The Water of the Thames is computed thus :

It is supposed to run at Kingston bridge, where the tide reaches not, at the rate of two miles an hour, which is 48 miles in 24 hours ; 48 Miles are equal to 48,480 Yards. [Mifk=Yako-feiz], which being multiplied by 300 Yards (the Profile of water at

KINGSTON bridge, where it is supposed to be 100 yards broad and 3 deep) produces 25.344,000 cubic Y-ards of water [Yako-feiz per ig=Yél-tfoth], which are equal to 20.300,000 TONS [=ez-igthton]

The Memorial Line.

Mifk=Yako-feiz (Kin-prig) Yako-feiz per ig=Yél-tfoth=ez-igthton.

The Velocity of Sound, Light, &c.

A cannon bullet (GLOBUS tormento bellico emissus) in a SECOND, moves 204 YARDS [In-sec Glob-yarezo]

Light (LUMEN) in a second moves 200,000 MILES [Lu-milegth]

Sound (SONUS) moves in a second 1142 feet (PEDES) [Son-ped-movetabfe]

A cannon bullet moves a M-ile in 17 HALF SECONDS [Glob-M-ápha-sec]

Sound moves a mile in 9 half seconds $\frac{1}{4}$. [Sonn,ro]

A cannon bullet would be in moving to the sun (AD SOLEM) 32 years $\frac{1}{2}$. [Ad-sol-glob=án-te,re]

Sound would be in moving to the sun 17 years [Sonap]

The descent of heavy bodies (DESCENSUS GRAVIUM) is 16 F-eeet $\frac{1}{12}$, or an inch, in a SECOND [Des-gravi-sec=fas,rad] and in more seconds as the squares of those times.

A PENDULUM of 39 inches 2 tenths (PENDULUM Intou,d) OSCILLATES or vibrates SECONDS [Oscil-sec-Pendulum-Intou-d]

The Memorial Lines.

In-sec Glob-yarezo, Lu-milegth, Son-ped-movetabfe.
Glob-M-ápha-sec, Sonn,ro, Ad-sol-glob=án-te,re, Sonap
Des-gravi-sec=fas,rad, Oscil-sec-Pendulum-Intou,d.

The Jewish Months.

NISAN or ABIB

^a March

^a i. e. part of March and part of April, and so of the rest.

| | |
|--------------------|-----------|
| ZIF or J-air | April |
| Sivan | May |
| THAMUZ | June |
| AB | July |
| ELÜL | August |
| TIZRI or ETHEnim | September |
| BUL or M-erchesvan | October |
| CHISLEU | November |
| THEbeth | December |
| SHEbeth | January |
| ADar or Veadar | February |

The Memorial Lines.

Nis-Abimar, Zif-Jap, Sima, Thámjun, Abjul, Elúlaug.
Tizr-Ethesep, Bul-moc, ChisleuN, Thede, Shebjan, &
Adfeb.

The Grecian Months.

| | |
|--------------|-----------|
| Ἑκατομβαιῶν | June |
| ΜΕΤΑΓΕΙΤΝΙῶν | July |
| ΒΟΗΔΡΟΜΙῶν | August |
| ΜΑΙΜΑΚΤΗΡΙῶν | September |
| ΠΥΑΝΕΨΙῶν | October |
| ΠΟΣΕΙΔΕῶν | November |
| ΓΑΜΗΛΙῶν | December |
| ἸΑΝΘΕΣΤΗΡΙῶν | January |
| ἙΛΑΦΕΘΟΛΙῶν | February |
| ΜΟΥΝΥΧΙῶν | March |
| ΘΑΡΓΗΛΙῶν | April |
| ΣΚΙΡΕΟΦΟΡΙῶν | May |

The Memorial Lines.

Hecju, Metageíjul, Boedraug, MaiS, PúanO, Posnov,
Gandecem, Anthesjan, Elafeb, MouM, ThargelA,
Skirma.

Note, That the Athenians began their year from the new moon, whose full was next after the summer solstice, which was at first reckoned to be upon the 8th of July, after on the 27th of June. *Vide Beveregii Chron. Instit. lib. i. cap. 12.*

Jewish and Christian Æra of the Creation.

Both Jewish and Christian writers make use of the æra of the creation of the world; but there is great variety of opinions concerning the number of years between that and the birth of Christ. That which is most generally received is, that the first year of the vulgar Christian æra commences from the day of his circumcision, viz. the first of January, in the year of the world 4004, and of the Julian period 4714. The Jews place the creation of the world *later* by about 243 years; and the Greek historians, upon the authority of the Septuagint, *sooner* by about 1490 or 1500 years; so that

| | | | | |
|---------|---|---------|---|---|
| Oct. 7 | } of the first year of the Christian æra | } began | { | the 3762 year of the Jewish æra |
| Aug. 27 | | | | the 5494 of the GREEK Ecclesiastical æra |
| Sept. 1 | | | | the 5509 of the GREEK CIVIL æra. |

The Memorial Line.

Christ = mún dothf, Jud = ipaud, Grec-Ecc = lonf.
Grec-Civil = ulzou.

The Days^b of the Month on which the other noted Epochas began.

| | | | Bef. Christ |
|---------------------------------|-------|-----|-------------|
| The destruction of TROY | June | 16. | 1183 |
| ^c The first OLYMPIAD | June | 19. | 776 |
| The building of ROME | April | 21. | 753 |
| ^d Æra of NABONASSAR | Feb. | 26. | 747 |

^b For the years, see page 7.

^c The last day of the Olympic games was upon the full moon immediately after the summer solstice.

^d The Nabonassarean years, not admitting any intercalary day, began, after every four years, a day sooner, and in 1461 years (*bosa*) went back throughout the whole Julian year, and began on the same day again.

| | | |
|-----------------------|----------|-------------|
| | | Bef. Christ |
| The PHILIPPIC æra | Nov. 12. | 324 |
| Æra of Contracts | Oct. 1. | 312 |
| The VICTORY at Actium | Sept. 2. | 51 |
| | | An. Dom. |
| The Dioclesian æra | Aug. 29. | 284 |
| The MAHOMETAN æra | July 16. | 622 |
| The æra of YEZDEGIRD | June 16. | 632 |

The Memorial Lines.

Mund=Octoi, Oly-jan, Phil-nad, Nab-fés (bosa)
 Ro-pda.
 Yez-Troy-jas, Maho-las, Dio-gen, Vict-Acta-se,
 Con-ta.

The specific Gravities of some Metals, and other Bodies^e.

| A cubic inch of | | Ounces Troy. decim | |
|--|---------------------------------------|-----------------------|------------|
| | | | |
| { | ^f Fine gold [Aur=az,iloud] | = | 10 ,359273 |
| | Fine silver [Arg=l,eil] | = | 5 ,850035 |
| | Lead [Plumb=s,lutkul] | = | 6 ,553855 |
| | Common iron [Fer=f,oden] | = | 4 ,422979 |
| | Fine marble [Mar=b,laukk] | = | 1 ,568859 |
| | Common glass [Vitru=b,oniz] | = | 1 ,493037 |
| | Com. clear water [Aqua=b,loiksoup] | = | 1 ,578697 |
| | Sound dry oak [Robo=lislaun] | = | ,536569 |
| | Oil Olive [Ol-Ole=lektuz] | = | ,528350 |
| Aur=az,iloud: Arg=l,eil. Plum=s,lutkul: Fer=f,oden: Mar=b,laukk. | | | |
| Vitru=b,oniz: Aqua=b,loiks: Robo=lislaun: Ol-Ole=lektuz. | | | |

Numerus Dignitatum, &c. Tempore Camdeni.

^e Sunt in Anglia DECANATUS 26, ARCHIDIACONATUS 60, DIGNITATES & PRÆBENDÆ 544, ECCLESIAE-

^e See Ward's Mathematician's Guide, part i. chap. 10.

^f The beginning of the *technical* words is from the Latin word for each.

^e *Camdeni Britannia*, edit. Jaus. p. 67.

PAROCHIALES 9284 e quibus 3845 sunt APPROPRIATÆ.
In libro tamen Thomæ Wolsæi Cardinalis descripto
1520, per comitatus numerantur ecclesiæ 9407.

The Memorial Line.

Sunt Decanes, Archdauz, Præblof, Parochoudeif,
Apprikfu.

*The Temple of the eight Winds, mentioned in
Dr. Potter's Archæologia.*

| | | |
|------------|------------|----------------|
| Εὐρ☉ | Eurus | S-outh E-east. |
| Ἀπηνλιώτης | Subsolanus | E-east. |
| Καικίας | CÆCIAS | N-orth E-east. |
| Βορέας | BOREAS | N-orth. |
| ΣΚΙρον | CORUS | N-orth W-east. |
| Ζέφυρος☉ | Occidens | W-east. |
| Νότος☉ | NOTUS | S-outh. |
| Αἴψ | AFRICUS | S-outh West. |

The Memorial Line.

Cæci=NE, Σκι-Cor=NoW, Εὐ=SE, Α-Af=SoW,
Βόρ=N, Ἀπ=E, NotS, Z=Ow.

*According to Aulus Gellius, the Winds are thus
distinguished.*

| | | |
|------------|------------|-------------|
| Septentrio | Ἀπηνκτίας | North. |
| Eurus | Subsolanus | East. |
| Auster | Notus | South. |
| Favonius | Zephyrus | West. |
| Boreas | Aquilo | North East. |
| Vulturnus | Euronotus | South East. |
| Caurus | Ἀγρυσής | North West. |
| Africus | Libs | South West. |

Roman Militia.

| | | |
|-------------|---|-------------|
| A LEGION | = | 10 COhorts. |
| A COhort | = | 3 MANipuli. |
| A MANipulus | = | 2 ORDines. |
| A TURma | = | 3 DECURios. |

10. T-urmæ were the *justus equitalus*, or horse belonging to a Legion.

The Memorial Line.

Legi = coaz, Coho = mant, Manip = ord, Turm = décuri, Taz-le.

Roman Law.

Primus fundus Jurisprudentiæ Romanæ, LEGUM REGIARUM fragmenta, (quæ a Sexto PAPIRIO olim in unum corpus collecta fuerant) sc. trium REGUM ROMULI, NUMÆ et SERVII TULLII; secundus, leges 12 TABULARUM; tertius, EDICTUM PERPETUUM quod (ADRIANI Imp. Autoritate) a SALVIO JULIANO conditum atque in titulos digestum.

Codex Justinianus compositus ex codicibus GREGORIANO, HERMOGENIANO atque THEODOSIANO, novellisque post eos positis constitutionibus.

GREGORIANUS et HERMOGENIANUS nominantur ab authore. Prior codex ab ADRIANO ad VALERIUM latas leges continebat, secundus a CLAUDIO ad DIOCLETIANUM; THEODOSIANUS leges CONSTANTINI ad THEODOSIUM. Novellæ a THEODOSII temporibus ad JUSTINIANUM.

The Memorial Line.

Leg-reg (Pap) Ro-nu-serv: Tabulad: Ed-perp (Adri) Salv-Jul.

Greg = A-Val Herm = Clau-Di: Theo = Const-The: Nov = Theo-Justin.

The first Code of Justinian was published anno 529, the Digests anno 531, the Institute anno 533, the Second CODE anno 534, the Novells from the year 535 to 558.

The Memorial Line.

Cod-prilen: Diglib: Instlit: Co-selif: Novelil-luk.

*The Bishops^h who refused their assent to
the 'Ομοόσιον.*

Eusebius, bishop of Nicomedia.

THEOGNIS, bishop of Nice.

MARIS, bishop of CHALCEDON.

THEONAS, bishop of MARMARICA.

SECUNDUS, bishop of PTOLEMAIS.

The Memorial Line.

Eu-Nico, Theog-Ni, Mar-Chal, Sec-Ptol, Theo-Marmar.

The ten PERSECUTIONS under

NEIRO, DOmitian, NERVA, ANTONINUS PIUS,
SEVERUS, MAXIMIN, DECIUS, VALERIAN, AURELIAN,
DIOCLESIAN.

The Memorial Line.

PERS = Ne-Do-Nerv-Ant-Pi-Sev-Max-De-Val-Aure-Diocles.

The Electors of Germany

Were the Archbishops of MENTZ, TRIERS, and COLOGNE, Elector Palatine of the RHINE, the King of BOHEMIA, the Electors of BAVARIA, SAXONY, BRANDENBURG: the Elector of HANOVER was added, Anno Dom. 1693.

The Memorial Line.

Men-Trí-Co-Rhin-Bohe-Bav-Sax-Branden: Hanover
ad sount.

The Quinquarticular Controversy, concerning

1. PREDESTINATION. 2. Free-will. (LIBERUM Arbitrium). 3. The force of Divine Assistance

^h Ταύτην τὴν πίσιν τριακόσιοι μὲν πρὸς τὰς δικοκλίᾳ, ἔγνωσαν τε καὶ ἔστειραν· καὶ ὡς φησὶν ὁ Εὐσέβιος, ὁμοφανήσαντες καὶ ὁμοδοξήσαντες ἔγραφον· πῖνις δὲ μόνοι ἔ προσεδέξαντο, τῆς λέξεως τῆ ὁμοουσίᾳ ἐπιλαβόμενοι. Εὐσέβιος ὁ Νικομηδείας, &c. Socratis Historia Ecclesiastica, lib. i. cap. 8.

{AUXILIUM). . 4 PERSEVERANCE. 5. The extent
REDEMPTION.

The Calvinian doctrine upon these points, handed from Geneva by the English refugees, and propagated by CARTWRIGHT in the Margaret professor's chair at Cambridge, was, at a consultation of several prelates and divines at Lambeth, digested into nine articles, commonly called the LAMBETH ARTICLES, and agreed upon N-ov. 10, 1595, [Naz-aloul,] but, by order of Queen Elizabeth, were immediately recalled and suppressed.

The Memorial Line.

Lamb-Art = Cart-Naz-aloul: Predés-Liber-Auxili-
Pers-Red.

The seven Precepts (SEPTEM PRÆCEPTA) of the sons of Noah are recorded by the Jewish Doctors under the following Titles:

I. To worship the true God, [CULTUS divinus.]

II. To renounce IDOLATRY.

III. To commit no murder, [CÆDES.]

IV. Not to be defiled with fornication, &c.
[STUPRUM.]

V. To avoid all rapine, theft, &c. [FURTUM.]

VI. To administer justice, [JUSTITIA.]

VII. Not to eat the flesh with the blood, [SANGUIS.]

Such Gentiles as were admitted to the worship of the God of Israel, and the hope of a future life, but were not circumcised, nor yet conformed to the Mo-saical rites, being only obliged to the observation of the foregoing precepts, were called proselytes of the gate, in opposition to the proselytes of righteousness, or of the covenant, who differed nothing from the Jews, but that they were of Gentile race. See Lewis's Hebrew Antiquities.

The Memorial Line.

Sept-Præcept = Cul-Idol-Cæd-Stup-Furt-Jústiti-San-
guis.

Misnah, Gemarah, Talmud.

The MISNAH in 6 B-ooks [Misna-Bs] contained 63 Tracts [Traut] into which the traditions or oral law of the Jews were methodically digested by Rabbi Judáh HAKKADOSH in the time of ANTONINUS P-ius [Hakad-AnP]. As soon as it was published, it became the subject of the study of all their learned men, and the chiefest of them, both in Judæa and Babylonia, employed themselves to make comments upon it; and these, with the Misnah, make up both their Talmuds, *i. e.* the Jerusalem Talmud and the Babylonish Talmud. These comments are called the GEMARAH or complement, the Misnah the text; both together the TALMUD [Tal = Mís-Gema]. The JERUSALEM TALMUD was completed about A. D. 300 [Tál-Jerig]. The B-ABYLONISH TALMUD about 500, or in the beginning of the sixth century [Tal-Bug]. This latter is only in esteem among the Jews. See *Prideaux's Connection*, p. 328.

The Memorial Line.

Misna-Bs-Traut-Hakad-AnP: Tal = Mís-Gema:
Tál-jerig: Tal-Bug.

Characters Arithmetici Græci et Hebraici.

Ab-βέ-γι-δο eu-sau ζoi-ηk-δου-ια κέζ-λι-μο nu-ξau.
Op-πει λου γά-σε-τι υf-φu-χau, ψoi-ωπει σανου.
Ab-ב-ג-י-דו הו-יאו יוי חק הו יא כז-ל-י-מ ונ-סאו.
Op-פ-י הו קא-ר-ע-ש חפ-ח-סאו יויקו ה-י הו.

The decads and hundreds will be easily distinguished from each other, and therefore only the first figure is added, *li* sc. *l*=3, *i. e.* 30; *re* sc. *r*=e, *i. e.* 200. Pronounce λου, kopou, σανου, Sanpeu, חפ Thauf, הו tsadou.

The Ages of Christianity, as distinguished by Dr. Cave, according to what was most remarkable in each Century.

| | | | |
|-------|-------|---------|----------------|
| Cent. | I. | Sæculum | ApOstolicum |
| Cent. | II. | Sæculum | G-nosticum |
| Cent. | III. | Sæculum | Novatianum |
| Cent. | IV. | Sæculum | ARIanum |
| Cent. | V. | Sæculum | NEStorianum |
| Cent. | VI. | Sæculum | EuTycticum |
| Cent. | VII. | Sæculum | MoNOTHeliticum |
| Cent. | VIII. | Sæculum | EcONiclasticum |
| Cent. | IX. | Sæculum | PHOTianum |
| Cent. | X. | Sæculum | OBScurum |
| Cent. | XI. | Sæculum | HiLdebrandinum |
| Cent. | XII. | Sæculum | WAldense |
| Cent. | XIII. | Sæculum | SCHolasticum |
| Cent. | XIV. | Sæculum | WicKlevianum |
| Cent. | XV. | Sæculum | Synodale |
| Cent. | XVI. | Sæculum | R-eformatum. |

The Memorial Line.

Ap-G-Nov Ari-Nest Eut-Monoth Ec-Phot-Ob Hil-
Wa-Scho Wick-Sy-R.



The Division of the Roman Empire out of the Book called Notitia Imperii, said to be written about the Time of Arcadius and Honorius.

The whole empire was divided into 13 Dioceses, under 4 PRÆfecti PRætorio, and about 120 Provinces contained in them. [PRæf=dibi=pradz.]

1. The PRæfectus PRætorio ORientis, and under him five dioceses, viz. the ORiental, E-gyptian, As-iatic, PONTic, and THRACian dioceses. [Or=E-As-Po-Th.]

2. The PRæfectus PRætorio of ILlyricum, and

under him two dioceses, viz. MACEDONIA and D-acia.
[Ill=Ma-D.]

3. The *Præfectus Prætorio* of Italy, and under him three dioceses, viz. Italy, ILlyricum, and Africa.
[It=It-Il-Af.]

4. The *Præfectus Prætorio G-alliarum*, and under him three dioceses, viz. Hispania, GALLia, and B-rittania.
[G=His-Ga-B.]

The Memorial Line.

Præf = Dibi = Pradz : Ill = Ma-D : Or = E-As-Po-
Th : It=It-Il-Af : G=His-Ga-B.

The Dimensions of the Ark and Temple.

The length (LONGitudo) of the ARK 300 CUBits.
[Ark-lo-cubig.] The Breadth 50 cubits. The height (ALTitudo) 30 cubits. [Bruz-Aliz.]

The length of the TEMple which K. Solomon built for the Lord was 60 Cubits, the Breadth thereof 20 cubits, and the height thereof 30 cubits. 1 Kings vi. 2. [Tem-Lónsy-Brez-Alty.] The length of the Porch 20 cubits, the height thereof 120 cubits. 2 Chron. iii. 4. [Porez-bez.]

Ark-Lo-cubig-Bruz-Aliz, Tem-Lónsy-Brez-Alty,
Porez-bez.

*Computation of the Cost, Vessels, Vestments, &c. of
Solomon's Temple.*

By Villalpandus's computation of the number of TALEnts of gold, silver, and brass, laid out upon the TEMple, the sum amounts to 6904.822,500*l.* sterling. [Tal-tem=souzo-ked-ug.] And the jewels are reckoned to exceed this sum.

Vessels of gold (VASA AUREA) consecrated to the use of the temple, are reckoned by Josephus 140,000, [Vas-aureabózt*h*,] which, according to Capel's reduction of the tables contained in them, amounts to 545.296,203 pounds sterling, [lol-enáu-dyt.]

The vessels of silver (Vasā ARGENTEA) 1,340,000 [Vas-áratózh] are computed at £439,344,000, [fin-tofth.]

Priests' vestments of silk (VESTES SERICÆ) 10,000, [Vest-sericazth.]

Purple vestments for singers 2,000,000, [Pem.] Trumpets 200,000, [Tregth.] Other musical INSTRUMENTS 40,000, [Instroz.]

Besides these charges, there was that of the other materials, and of 10,000 men per month in Lebanon to hew down timber (SYLVICIDÆ) [Sylvicidaz.] To carry burthens (VECTORES) 70,000, [Vectoiz] To hew stones (LAPICIDINÆ) 80,000, [Lapiky], and 3300 overseers (EPISCOPI) [Episcoptig], who were all employed for 7 years (ANNIS SEPTEM), to whom, besides their wages and diet, Solomon gave a free gift 6,733,977 pounds (DONUM SOLOMONIS) [s-paut-noip]. The treasure left by David towards carrying on this work (RELIQUIT DAVID) 911,416,207. [nab-oás-dyp.]

N. B. *th* is left out, as Sylvicidaz for Sylvicidazth, &c. it being impossible to mistake 10,000 for 10.

The Memorial Lines.

Tal-tem = souzo-ked-ug : Vas-aureabózh = lol-enáudyt.

Vas-áratózh = fin-tofth : Tregth : Instroz : Vest-sericáz : Pem.

An-sept Silvicidaz, Lapiky, Vectoiz, Episcoptig.

Don Solomo-s-paut-noip : reliquit Dav-nab-oás-dyp.

The number of those that returned (REDUCES) from the captivity were 42,360 [Redufe-tauz] besides PROSELYTES 7337. [Proseloitip.]

The particular sums in EZRA'S CATALOGUE amount to 29,828. [Cat-ézdou-kek.]

The particular sums in NEHEMIAH'S CATALOGUE 31,031. [Cat-nehetazib.] How these accounts are reconciled, see the Index to the Bible.

The Memorial Line.

Redufe-tauz-Proseloitip: Cat-ézdou-kek, Cat-nehe-tazib.

The SILVER of them that were numbered of the CONGREGATIONS was a hundred TALENTS and a thousand seven hundred and threescore and fifteen SHEKELS after the shekel of the sanctuary, a BEKAH for every man, that is, half a shekel after the shekel of the sanctuary, for every one that went to be numbered, from twenty years old and upwards, for six hundred thousand and three thousand and five hundred and fifty men. Exod. xxviii. 25, 26.

The Memorial Line.

Sil=Con=Talg-Shékapoil, Bek-syt-luz=Shekelizappu.

Difference of Talents.

| | Attic minas. | Att. drachms. |
|---------------------------|--------------|---------------|
| A SYRIAN TALENT contained | 15 | 1500 |
| A PTOLEMAIC talent | 20 | 2000 |
| An EUBOIC talent | 60 | 6000 |
| An ALEXANDRIAN talent | 120 | 12000 |
| An ANTIOCHIAN talent | 60 | 6000 |
| A larger ATTIC talent | 80 | 8000 |
| A BABYLONISH talent | 70 | 7000 |
| An ÆGINEAN talent | 100 | 10000 |
| A RHODIAN talent | 100 | 10000 |
| A TYRIAN talent | 80 | 8000 |
| An ÆGYPTIAN talent | 80 | 8000 |

The Memorial Lines.

Tal-Syr=Mal: Ptolem=ez: Eub=auz: Alexan=bez & Ant=auz.

Att-Maj=eiz: Babyl=oiz: Ægin=ag: Rh=ag:
Tyr-Ægypt=eiz.

I shall conclude with two lines, just to shew how

ⁱ According to some, the Rhodian talent contained but 4500 Attic drachms, and the Euboic but 4000. *Vide Brerewood de Ponderibus et Pretiis*, cap. 9.

by this method may be remembered the year and chapter of any particular statute. Those to whom a hint of this nature may perhaps be thought useful, are best capable of applying and improving it as they shall see occasion.

An Act for prevention of FRAUDS and Perjuries 29 CAROL. II. c. 3. [Fraud-Carolen-t].

An Act against abuses in presentation to benefices (SIMONY) 31 ELIZ. c. 6. [Sim-Elib-s].

The Bill for first fruits (PRIMITIÆ) 26 H-en. VIII. c. 3. [Primit-Hes-t].

An Act for the dissolution of the MONASTERIES.

The lesser 27 H. VIII. c. 28. } [Monast-Hep-ek.

The greater 31 H. VIII. c. 11. } ib-ba].

The Memorial Line.

Fraud-Carolen-t; Sim-Elib-s; Primit-Hes-t; Monast-Hep-ek-ib-ba.

To remember the several statutes relating to the same subject must needs be more difficult, as there is but one leading syllable for the whole line; but may be done in the following manner:

Some of the principal acts which relate to the poor (PAUPERES) are 43 ELIZ. c. 2. 13, 14 CAR. II. c. 12. 3, 4 WILLIAM and M-ary, c. 11. 8, 9 WIL. III. c. 30. 9, 10 WIL. III. c. 11. 12 ANN. c. 18.

The Memorial Line.

Paup-Elot,e, Carat,ad, Wi-Mt-eib, Wilk,iz.n,ab. An-ad-bei.

LOWE'S MNEMONICS.

DR. WATTS, in his Essay on the Improvement of the Mind, near the conclusion of the 17th chapter, where he more especially treats of Improving the Memory, makes the following observation :

“ Dr. Grey, in his book called *Memoria Technica*, “ has exchanged the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, “ for some consonants, b, d, t, f, l, s, p, k, n, z, and “ the vowels a, e, i, o, u, y, with several diphthongs, “ and thereby formed words that denote numbers, “ which may be more easily remembered: and Mr. “ Lowe has improved Dr. Grey’s scheme in a small “ pamphlet called *MNEMONICS DELINEATED*, whereby “ in a few leaves he has comprised almost an infinity “ of things in science and common life, and reduced “ them to a sort of measure like Latin verse.”

Under sanction of the great authority above quoted, the publisher of the present edition has annexed Mr. Lowe’s tract, which the author originally intended both as a supplement to and an improvement of Dr. Grey’s method; accordingly asserting in his advertisement, that “ most of the articles are what perhaps did not occur to Dr. Grey; and the rest are “ reformed to good purpose, particularly those of “ Weights, Coins, and Measures, of which I have “ given a full account in less than eight pages, “ whereas the Doctor’s, though very defective, “ amounts to twenty-eight.”

The two schemes are now before the reader, to use whichever seems best; and though Mr. Lowe’s is in some instances little more than a repetition of Dr. Grey’s plan, yet it has been thought adviseable to

reprint the whole at full length, and even to follow his peculiar mode of spelling, as most consistent with brevity. It may also be necessary to premise, that Mr. Lowe's astronomical calculations are according to the old style, and his geographical divisions are as they existed in the year 1737, the time when his pamphlet was first published; which disagreement with the present period it is hoped the industry and sagacity of the learner can easily rectify, by composing new technical words, which may be more easily remembered than those formed by another; these works being originally designed more as specimens of what might be done by attention, than as complete sets of tables in the various branches of learning and science.

THE KEY.

Directions for the better learning to remember Figures or Numbers expressed by Letters.

| | | | | | | | | | |
|---|---|---|---|---|----|----|----|----|---|
| a | e | i | o | u | au | oi | ei | ou | y |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| b | d | t | f | l | s | p | k | n | z |

g 100. th 1,000. m. 1,000,000.

r denotes fractions, as follows: ,ro $\frac{1}{4}$: ,iro $\frac{3}{4}$: d,eri $2\frac{2}{3}$: ,rag ,01.

ARITHMETIC.

Arithmetical Characters.

+ and: — less: × multiplied-into: ÷ divided-by: = is, gives.

*The Division of the old Roman AS, viz. any Integer, or Whole.**

Uncia. Sext. Quā. Triens. Quinc. Sem. Sept. Bes.
Dōdrā. Dext. Deu.

| | | | |
|-----------|----|----------|---|
| AS, parts | 12 | Semissis | 6 |
| Deunx | 11 | Quincunx | 5 |
| Dextans | 10 | Triens | 4 |
| Dodrans | 9 | Quadrans | 3 |
| Bessis | 8 | Sextans | 2 |
| Septunx | 7 | UNCIA | 1 |

COINS.

Coins reduced to Farthings.

- 1 E.]³ Sh-ok. Cr-ěfy.] N-idz. Ange-okz. M-ăufy.
Gui-bzyk. Car-băzo. Jac-beg.
- 2 H. Ger-f] Bě-lŭ. Sh-abz. *Man-sups. †Tal-ideith
feil] Sh-aplě. Tal-um dusth.
- 3 G. Lep-,tăritau. Dŭchăl-a,prěf. ōb-u,rau]*Dr-ib.
‡Stătěr-ado.
- 4 R. T,oipŭrăth. §As-t,raz] Ses-p,irf. V-al,rě.
Děn-ib. Sp-oil.] Aŭr-oipu.

| | | | |
|------------------|--------------|---|---|
| * † † § | Proportions. | { | DRACHM] Hěb-ŭs. Att-tŭ. Alex-oid—MIN] |
| | | | Att-tig. Ităl-ekeiz. |
| | | | TAL] Att-boukth. Băb-ětath.] Att-ŭbauth eig. Bab-ŭm-ăunsth. R-akyth. |
| | | | STATĒR (gold) Att-poil. Cyz-Phŭl-Alex-dap. Croes-Dări-buly. |
| | | { | As weighed Ouncēs-ăd, U-C-bouz ⁴ : e; fouz: a; lŭp: -ăre; leis. |

MONEY.

Sums of Money, or Money of Account.

- 5 { (E) Penn-f. Gr-as. Pound-ousy. (G) TAL.
MIN. Ēgi-g=ubss. ⁵Ant-sy=g.

- 6 { Bab-oi=*tuns*. Pt-az=*aztī*. Sŷr-al=*poil*. Ty-
rian-eiz=*fatt*.
- 7 { (R) SESTERCE——tō-ath, duo, bini nummi——
tō-am, duo, bina,
- 8 { —stertia : or millia sestertiūm,——above, by the
adverbs, as follows :
- 9 { Bis sestertiūm, or bis ; understanding millia cen-
tum (or centena).

6 Abbreviatures explained.

Æginéa mina, talentum (lin.) 5. *Alexandrina* drachma, *; stater, †. Angel, 1. *Antiochica* min. tal. 5. As, 4. §. *Attica* drachma, *, mina, *, stater, †; talentum, †. Aureus denarius, 4. *Babylonica* min. tal. †. Bekah, 2. Carolus, 1. *Cræsius* stater, †. Crown, 1. *Cyzicénus* stater, †. Daricus stater, †. Denarius, 4. Dichalcos, 3. Drachma, 3. Gerah 2. Groat^c, 5 : Guinea, 1. *Hebraica* drachma, *. Jacobus. 1. *Italica* mina, *. Lepton, 3. Maneh, 2. Mark, 1. *Mina*^c, *, 5. Noble, 1. Obolus, 3. Penny^c, 5. Philippicus stater, †. Pound, 5. *Ptolemaica* min. tal. 6. Románum talentum, †. *Sestertium*, 7. Sestertius, 4. Shekel, 2. Shilling, 1. Sportula, 4. Stater. 3. *Syria* min. tal. 6. *Talentum*^c, 2, 5. Teruncius, 4. *Tyria* min. tal. 6. *Victoriátus*, 4.

6 Synonyms and Equivalents.

Æs, as. Assarium, as. *Attica minor mina*=antiochica. *Attica major mina*=tyria. Bigátus, denarius. Centussis, 100 asses, Chalcos, $\frac{1}{2}$ dichalchos. Decussis^c, 10 asses. Didrachmon, 2 drachmæ. Diobolon, 2 oboli. Dupondius^c, 2 asses. *Eubæa mina*=antiochica. Hemiobolon, $\frac{1}{2}$ obolus. Laureat, carolus. Libella, as. *Libra* (or libra pondo) = mina attica. Mna, mina. Nonussis, 9 asses. Nummus, sestertius. Obolus, $\frac{1}{2}$ noble. Octussis, 8 asses. Penta-drachmon, 5 drachmæ. Pondo, v. libra. Quadrans,

$\frac{1}{4}$ as, $\frac{1}{4}$ noble. Quadrigátus, denarius. Quadrussis^c, 4 asses. Quinarius, victoriátus. Quinquessis^c, 5 asses. Rhodia=ægrinea. Sembella, semilibella. Semilibella, $\frac{1}{2}$ libella. Semuncia, $\frac{1}{2}$ uncia. Sescuncia, $1\frac{1}{2}$ uncia. Sextans^c, $\frac{1}{6}$ as. Sextula^c, $\frac{1}{8}$ uncia. Solidus, aureus. Tetradrachmon, 4 drachmæ. Tetrobolon, 4 oboli. Tressis, 3 asses. Tricessis, 30 asses. Tridrachmon, 3 drachmæ. Treins^c, $\frac{1}{8}$ as. Triobolon, 3 oboli. Vigessis, 20 asses. Uncia^c, $\frac{1}{12}$ as.



1 N.B. The several *coins, measures, and weights*, being reduced to the lowest denominations, the memorial verses answer all the purposes of the largest tables: (1) The difference of any two terms being known by subtraction^a: and (2) How many of any make one of another, by division^b.—e. g. (a) What is the difference between a *Shilling* and a *Shekel*? Answ. (Sh-ab:) 110—(Sh-ok) $48=62$ q. i. e. $S\ 2 : 3 : 2-S\ 1=S\ 1 : 3 : 2$, the shekel more than the shilling. (b) How many *Spens* make a *Fathom*? Answ. (Fath-oid) $72 \div (\text{Spa-n})\ 9=8$. Accordingly, if it be asked, *What is a fathom?* (and so of any other) the answer may be made, the same way, in any of the prior denominations: e. g. 24 palms, or 6 feet, or 4 cubits, or 2 yards, or $1\frac{1}{2}$ pace, &c.

2 Any whole was called AS, and 1 twelfth of it UNCIA [whence our terms of *ounces* for weight, and *inches* for length]. The several numbers of those uncia (between 1 and 12)—were denominated, in order, as follows in text: viz. Sextans (i. e. $\frac{1}{6}$) 2 Quadrans ($\frac{1}{4}$) 3, &c.—and express their manner of reckoning *Interest* of money: thus *usuræ asses* [centesimæ] was 1 per month [12 per year] per cent. (suppose aurei, or pounds: *deunces*, 11 twelfths per month, and so on to *unciariæ*, 1 twelfth per month [1 per year] e. g. 20d. per month, 20s. per year.

3 Of the three apartments distinguished by brackets, in the 1st are Brass- or Copper-; 2d, Silver-; 3d, Gold-coins.—N.B. (1) Sh-ok (as appears by the Abbreviatures explained underneath, and by the key above) signifies *Shilling* 48: i. e. a shilling is 48 farthings; and so of the rest. (2) *y* (the memorial letter) may be pronounced *wæe* or *wi*, to distinguish it from *i*: e. g. Cr-efy, as if it were Cr-efwi.

4 i. e. in the year (*Urbis Condita*) from the building of the city of Rome, 190.—c, fouz; i. e. U. C. 490, when the Punic war had exhausted the treasury, it weighed but 2. and so of the rest.

5 i. e. the Æginean mina was (ubss) 5656 q: (g) 100 of which made the Æginean talent. and so of the rest.

6 N.B. In these lists—those in *Italic* are moneys of account, the rest, coins.—The *Figures* and *Marks* refer to the corresponding memorial verses.

(c) N.B. There are also COIND Half-guineas, Seven-shilling pieces, Half-crowns, Three-pences, Two-pences, Half-pennies; and such as are distinguisht by a superior^c.

MEASURES.

Cubic Measures reduced to Pints.

- 1 { Quar-d. *Gal-k. R-afö. Bar-eld. Ti-(WINE) tts.
H-uzf. Paüpe. B-athei. T-ethbau.
- 2 { Firk-boid, ásf.¹ Kíl-äbek, baff (BEER & ALE)
Bar-bdeik. ädus. Hög-älad, bups.
- 3 { Pe-bs. Bū-so. Str-uek. Coom-dus (DRY) Se-übē.
Ch-etzo. We-ithpē. Lă-lady.
- 4 { (liq.) C-,urei. L-irö. Căb-i. H-az (H) Seăh-dÿ.
Bath-sÿ. Höm-auzu (-uid).
- 5 { Cab-,durau. Göm-,üráz. Se-boi (DRY) Bă-lă.
Le-dlaü. Hömer-lat.
- 6 { Coch-,rădÿ. Ch-rauz. Myst,rok (G) Conch-,raf.
Oxybă-,reï. Metr-eis.
- 7 { Coch-,rădÿ. Choen-brē. Mēdim-pē (DRY) Cÿ-
Ox-Cötÿ-Xest-as the Roman.
- 8 { Quart-,rö. Sē-a,rl. Cö-p. Ur-ek-ră (R) Quă-
dr-up. Cülē-bafp. Lī. Cÿ. Ace. Hem.
- 9 { Lig-,rok. Cy-rad. Acet-,reï. Hēm (DRY) in,rē.
Sē-a,rū. † Mod-as,re.
- 10 { *GALLÖN cöntains inches (dry) doid,rö²: (beër)
-ekē; (wine) eta³.
- 11 { †POTTLE Quărts (dr-) i (liquid)-e— † MODI-
Pints (liquid)-an (dry)-bau,ro.

Abbreviatures explained.

Acetabulum (lin.) 9, 8. Barrel, 1. Bath, 4.
Bushel, 3. Butt, 1. Cab, 4. Caph, 4. Cheme, 6.

Chaudron, 3. Chœnix, 7. Cochlearion, 6. Concha, 6. Congius, 8. Coomb, 3. Culeus, 8. Cyathus, 9. Firkin, 2. Gallon, 1. Gomer, 5. Hemina, 9. Hin, 4. Homer, 4, 5. Hogshead, 1, 2. Kilderkin, 2. Last, 3. Letech, 5. Ligula, 9, 8. Log, 4. Medimnus, 7. Metrètes, 6. Modius, 9, 11. Mystron, 6. Oxybaphon, 7. Peck, 3. Pottle, 11. Puncheon, 1. Quadrantal, 8. Quart, 1. Rundlet, 1. Seah, 4, 5. Seam, 3. Sextarius, 8, 9. Strike, 3. Tierce, 1. Tun, 1. Urna, 8. Wey, 3.

Synonyms and Equivalents.

Amphora, quadrantal. Amphoreus, metrètes. Cadus, metrètes. Carnock, coomb. Chos, congius. Coron, homer. Cotyle, hemina. Ephah, bath. Lingula, ligula. Omer, homer. Oxybaphon, acetabulum. Pipe, butt. Quarter, seam. Quartarius, $\frac{1}{4}$ sextarius. Semimodius, $\frac{1}{2}$ modius. Xestes, sextarius.



1 i. e. A *Firkin* (1) of Beer=72 pints. (2) of Ale=64 pints. and so of the rest.

2 By act of parliament, in 1697, the gallon contains only 268 $\frac{1}{8}$ inches.

3 By experiment, made in 1688, it was found to contain only 224 inches.



Long Measures reduced to Inches.

- | | | |
|---|---|--|
| 1 | { | Nail-d,ro. Pal-t. Hän-ö. Spa-n. Foot-ad. Cübī-bei. E (f l) ěp (eng) ol. |
| 2 | { | Y-is. Pa-sÿ. Fáth-pe. Ro-bouk. Furl-oindÿ. Mĭ-sĭtsy. Le-miles 3. |
| 3 | { | H. Pal-f. Sp-ad. C-ef. F-ous. Ez-böf. Ar-and. Schoen-andÿ. Stă-naug. M-ousth. |
| 4 | { | G. Dör-f. Lĭch-ăz. Orth-ab. Sp-ad. Pygm-ak. Pÿ-dz. O-nau. St-naug. M-oiskyz. |
| 5 | { | R. Unc-ă,ri. Pal-f. Pe-bs. Palm-dÿ, Cũo-ef. Gră-kÿ. Pass-kÿ. Stă-byth. |

Proportions.

- 6 { Line-be. Bär-i. DIGIT, INCH (Heb. Gk. Rom.)
nad : ,pulð : peldu¹. [M²-eizth.
- 7 { FOOT — Eng-ath. — Grëk-äzyp. —³ Rom (coss)
naup (st) oupě (vës) oukau.

Abbreviatures explained.

Arabian pole, 3. Barley-corn, 6. Cubit=pygme, pygon, pechus 1, 3, 5. Digit, 6. Doron=palm, 4. Ell (flemish, english) 1. Ezekiel's reed, 3. Fathom 2, 3. Foot=pous=pes 1, 5, 7. Furlong=stadium 2, 3, 4, 5. Gradus, 5. Hand, 1. League, 2. Lichas, 4. Line, 6. Mile=milion=miliäre 2, &c. Nail 1. Orguia, 4. Orthodóron, 4. Pace=passus 2, 5. Palm=doron 1, 3, 5. Palmipes, 5. Passus=pace, 5. Pes=foot, 5. Pygme, 4. Pygón, 4. Rod, 2. Schoenus, 3. Span=spithame 1, 3, 4. Spithame=span, 4. Stadium=furlong 4, 5. Uncia, 5. Yard, 2.

Synonyms and Equivalents.

Ammah, cubit. Aulos, furlong. Chebal, schœnus. Cubit (lesser) pygme (greater) pechys. Dactylo-
dochme, doron. Diaulos, 2 stadia. Dochme, doron. Gomed, span. Kaneh, Ezekiel's reed. Measuring-
rod, schœnus. Mili-are,-on: mile. Palæste, doron. Pathil, schœnus. Pechys, cubit, Perch, rod. Pole, rod. Pollex, uncia. Pous, pes. Tophach, palm, Ulna, cubitus. Zereth, span.

1 N.B. The *Digit* is sometimes divided into 4 grains; the *Line* into 6 points.

2 N.B. A *Sabbath day's journey* is reckoned to be 730 paces: 6 of which made the *Parasang*, 48 a *Day's journey*.

2 i. e. The proportion of the Roman foot to the English (divided into 1000 parts) is here expressed, as found—on the monument of *Cossutius*—on that of *Statilius*—on a congius of *Vespasian*.

Square Measures reduced to Square Feet.

- 1 { E. Yar-n. Pace-du. Pöle-ěpe,rö. Roöd-azkouz.
Acrě-ötusy.
- 2 { G. Plethron—azasf. Aroura, the half: but
Ægyptian—itdaun.
- 3 { R. Juger-esoutý. Cli-tisaŭ. Vě-nilý. (mín)
A-fökeï (qu) atfauz.

Abbreviatures explained.

Actus minimus, quadratus, 3. Clima, 3. Jugerum,
3. Versus, 3. Yard, 1.

MULTIPLICATION TABLE.

| | | | | | |
|-----------------|---|---|-------------------------------------|---|-------|
| from 7 by 12 | { | { | P-oi,on. P-ei,us. P-ou,si. K-ei,so, | } | 7 × 7 |
| | | | K-ou,pě. N-öu,eia. | | |
| | { | { | F-ad,fei. L-ad.sý. S-äd.oid. P- | } | = 49 |
| | | | ad,ko. K-ad,ouäü, N-ad,azei. | | |

NUMERICAL LETTERS.

- 1 R. { In Numerals] A less number, *afore*, Abates¹;
after, Encreases².
- 2 { I-b. V-u. X-az. L-uz. C-azý. D-ŭyz.
M (CIC³) *ath*: hence (CCIC³) *byth*,
- 3 H. { N-b. ' -az. p-ag⁴—bu⁵—from-ug by רףןכר
to ouzy⁶ [CCCIC³]
- 4 { -ath by the Units⁷: but oftener by רלכ, pre-
fixing the numbers⁸ [*azyth*.
- 5 G { a-b. i-az. g-ag⁴. s-au. (vi) koppä-ný (tau)
sanpi-ouýz⁹. á (α α α) -azyz
- 6 { I-b. Π-ŭ. Δ-ăz. H-ag. X-ath. M-azth. Π mul-
tiplies others inscribed in it¹⁰.

1 e. g. IV 4, IX 9, XL 40, XC 90.

2 e. g. — VI 6, XIV 14, XIX 19, XXIX 29 —

3 11, 12: 101, 102—11, 101, &c.

3 Formed, in current writing, from M: part whereof, united, (viz. יכ) became D 500. hence יככ 5000, יכככ 50000.

4 i. e. Units, tens, hundreds, begin from the letters here specified; and are to be reckoned on, in order, from them. e. g. α 1, β 2, γ 3, &c. ι 10, κ 20, λ 30, &c. ρ 100, σ 200, &c.

5 Instead of יהוה , being the ineffable name of Jehovah.

6 e. g. ה 500, ק 600, ר 700, &c.

7 Before the letters expressive of hundreds; as, אלדלר 1534: very seldom otherwise; אע 1070.

8 e. g. אלפיים 2000, גאלפים 3000, לאלפים 30000, &c.

9 The various figures and names of these numeral characters, see in my Table of Greek characters.

10 e. g. Δ (10) inscribed in Π (5) is $\overline{\Delta}$ (50.)

PRACTICE.

1. *If one*¹? the sought *into* Price², or its factors³; or *by* Aliquot parts⁴. and, by the Aliquots of Fractions of Sought (if any) *divide* Price⁵.
2. *What'll One*⁶? the Price *by* Commodity⁷; but, if too large, *by* its factors⁸.

1 i. e. In questions, where the conditional term is 1: as, when we say, "*If one* cost so much, what will so much cost?"

2 i. e. Multiply *the* question-term, or thing *sought*, *into* the price, &c.—e. g. *If one* cost 10s. what will 20 cost? &c. Answ. 20 (the thing sought) \times 10 (the price) = 200s. i. e. 10l.

3 viz. when more commodious.—e. g. *If one* cost 12 | 6, what will 14? Answ. The factors of 14 being 2×7 ; say $2 \times 12 | 6 = 25s$: then $7 \times 25s. = 175s.$ i. e. 8l. 15s.—N. B. If the multiplicator be not resolvable into factors, take those that come nearest it, and add the price for the odd one, or multiply it by what the factors want of the multiplicator.

4 Divide it *by* the *Even parts* of the denomination, in which you would have the answer.—e. g. *If one* cost 12 | 6, what will

14? Answ. 10s. being the $\frac{1}{2}$ of 1l. and 2 | 6 (which makes up the 12 | 6) the $\frac{1}{4}$ of 10s; say 2 in 14=7l. then, 4 in 7 (the quotient of 14 by 2)=1: and there remains 3l. which, in the next inferior denomination (viz. Shillings) is 60, then 4 in 60=15s.

| | | | | | | |
|---------------|---------------|------------------|---------------|------------------|---|--------|
| divided by | Thus . . . 14 | | | 14 pds. pks. &c. | | |
| | s | 10 $\frac{1}{2}$ | 7 - | 10 | 2 | 7 - |
| | d | 2 | | 2 | 5 | 1 8 |
| | | 6 $\frac{1}{4}$ | 1 15 | 6 | 4 | 50 - 7 |
| | | | S 12:6 L 8:15 | | | |
| | | | S 12:6 L 8:15 | | | |

5 As in the following example:

| | | | |
|------------------------|-----|----|-------------------------------|
| C qr lb | | | 1 s d |
| 84 | 3 | 11 | at 1 1 10 |
| L 1. s 1.=21s | | | qr. 2 $\frac{1}{2}$ - 10 11 |
| | | | 1 $\frac{1}{2}$ - 5 5 2 |
| | | | lb 7 $\frac{1}{4}$ - 1 4 1 |
| | | | 4 $\frac{1}{7}$ - - 9 1 |
| Aliq- uots of 1s | 84 | | |
| | 168 | | |
| d 6 $\frac{1}{2}$ | 42 | | |
| 4 $\frac{1}{3}$ | 28 | | |
| q 3. lb 11. s 18:6 | | | 3q. 11lb. 18 6 - |
| | | | aliq. of fract. pr. of fract. |

In all . . 1852:6 The answer: which, being
halv'd { 92:12:6; the price of C 84:
gives- { qr 3; lb 11.

6 i. e. In sums, wherein the Question-term is 1; as when we say, "If so much cost so much, *What'll one cost?*"

7 e. g. If 12 cost 10 | 6, what will 1? Answer, 12 in 10 | 6 1 cannot have: but 12 in 10×12 (to reduce it to pence)=120+6=126: then 12 in 126=10d. and 6 remains; which multiplied into 4 (to reduce it to farthings) is 24: then 12 in 24=2 q.

Thus { in s 10:6:- | or, by the factors of
12 - 10 2 | 12, viz.
2 \times 6, or 3 \times 4; as in the following:

8 The foregoing example will stand.

Thus { in s 10:6:- | in s 10:6:-
2 5 3 - | 2 3 6 -
6 10 2 | 4 - 10 2

So the answer is found more easily than by dividing by 12: much more so it will be, when that number is higher.

RULE OF THREE.

All Questions in it answered (1) by one stating (2) the same way.

- (1) **CONDITIONAL** in one line: and, opposite, the terms **CORRESPONDING**.
- (2) **-DEND** is the **-Ducing** of one *into* **-Duc'd** of the other: the **Rest-SOR**¹.

N. B. *No -Duc'd*: the *facit* of one line divide by that of the other².



1 i. e. *The producing*^a terms of one line multiplied into the *produc'd*^b of the other, give the *diviDEND*; and *the rest* of the terms multiplied together, give the *diviSOR*: the *Quotient* falls to the blank^c.—(a) *Producing* terms are such as jointly produce any effect. e. g. whatever is considered as a *cause*, with the adjuncts of *time, distance, measure, &c.*—(b) *Producing* terms as such as are connected with the others under the character of *price, purchase, produce, gain, loss, interest, advantage, value or quantity of work, &c.*—(c) e. g. At the rate of 6 per cent. per ann. what is the interest of 200l. for 18 months? Answ. The terms being stated, as they offer (without any other regard than Which are conditional, and Which imply the question) Thus:

| Interest | Principal | time |
|----------|-----------|------|
| 6l. | 100l. | 12m. |
| | 200 | 18 |

or in any other order agreeable to the directions in the rule, say $6 \text{ (the produced term of one line)} \times 18 \times 200 \text{ (the producing terms of the other)} = 21600 \text{ (for the dividend): And (the rest) } 100 \times 12 = 1200 \text{ (for the divisor). Then } 21600 \div 1200 = 18, \text{ the answer; viz. 18l.}$

2 i. e. If there be *no produc'd* term (as generally happens in the single rule of three inverse) *divide the facit, &c.*—e. g. How much stuff, yard-broad, will line 10 yards of cloth, yard-and-quarter broad? The terms being stated thus:

| | | |
|-------|----------|---|
| broad | long | say $5 \times 10 = 50$ |
| 4 qrs | | and $50 \div 4 = 12\frac{2}{4}$ |
| 5 | 10 yard. | i. e. 12 yards and $\frac{2}{4}$ or $\frac{1}{2}$. |

SUBTRACTION

May be more commodiously performed by *Addition*,
as in the next article.

TABULATING.

To multiply and divide by Addition only.

1. Twice-double-Multiplicand facits † every multiplier. † gives the f. of.
2. Tabulate Divisor: Quote next digit-under: Subtract by Addition.

| 1. In the MULTIPLICATION-SUM | | Multipli-cand cator | | | |
|---|---------|---------------------|---------|----------|-----|
| (I) the facits of the multiplicand <i>twice doubled</i> , are, as they stand against the digits 2 and 4. Then, To multiply the multiplicand—into 8 (the last figure of the multiplier) double the facit of the digit 4—into 6 (the 2d figure, &c.) add the facit of 4 to that of 2 (=6)—into 7 (the next figure, &c.) add together the facits of 1, 2, 4 (=7) placing each of them, as in the common method of multiplication. | Digits. | 1 | 98765 | × | 768 |
| | | 2 | 197530 | | (I) |
| | | 4 | 395060 | | |
| 2. In the DIVISION SUM (II) (1) <i>Tabulate the divisor</i> , as in the example, viz. against the digit 2, by adding the divisor to itself; against 3, by adding together the totals of 2 and 1; against 4, by adding the total of 2 to itself, or that of 3 to that of 1; and, in like manner, in the rest, by adding together the totals of any two or more digits, equal to the digit whose total is sought. Then, (2) <i>Quote</i> (or, for the quotient, take) the <i>digit</i> against the total <i>next less</i> , or <i>under</i> the first corresponding figures of the dividend, viz. 7585. Then, instead of subtracting, according to the common method, the facit of the divisor by 9 (viz. 6912) from (7585) the corresponding figures of the dividend (3) <i>Subtract by addition</i> , and say [not, 2 from 5, and there remains 3; but] 2, and (so much | Facits. | | 7901208 | by | |
| | | | 592590 | | 7 |
| | | | 691355 | | 6 |
| Dividend. | | | | Divisor. | |
| | | | | (II) | |
| | | | | | |
| Quotient (III) | | 75851520 | ÷ | 768 | 1 |
| | | 673794 | | 1536 | 2 |
| | | 5898 | | 2304 | 3 |
| Quotient: | | 43. | | 3072 | 4 |
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as will make 5, viz.) 3 is 5: then 1, and (as much as will make 8, viz.) 7 is 8: then 9, and [what will make 15 (since 9 cannot be taken from 5) viz.] 6 is 15^a, then, 1, that I borrow, and 6 is 7: and so on.——In the DIVISION-sum (III) it appears that——All the tabulating necessary to find the quotient, is only to double the divisor: for, the total next less than (the 1st dividend) 987, is 968: therefore quote 1: then (the 2d dividend) 196 has no total less; therefore quote 0: then the next total less than (the 3d dividend) 1965, is (the 2d total, viz.) 1936; therefore quote 2.——And, in like manner, may be tabulated any sum, by steps, as there shall be occasion.

^a N.B. 15, being the last sound in the mouth of the operator, does more readily and certainly remind him of what he borrowed, than in the common way of subtraction; which is no small advantage to this method.

WEIGHTS.

*Troy Weight, for Gold, Silver, Jewels, Grains,
and Liquors.*

Monyers reduced to Blanks.

1 MON. Pěrit-ef. Droit-oký. Míte-abth-udý. Grain-dizozy.

Goldsmiths and Apothecaries Weight reduced to Grains.

2 (GOLD.) Căr-ö¹. Pen-dö (Pö.) Scrup-dý. Drămauz. Ounce-oký. Pö-loisy.

*Averdupois Weight, for Baser-metals, Bread, Mercery,
Grocery, &c.*

Wool reduced to Pounds.

3 Clove-oi. Stone-bö. Töd-ek. Weigh-beid. Sack-tauf. Last-fisei.

Other Things.

4 Pound-ounce-as. Hun-pounds-abe. hún-Fother-án-are: Tun-ez.

Hebrew Weights, reduced to Grains.

5 Zuza-*lf.* Bek-*azei.* Shĕk-ĕbei². Măn-ĕbeizÿ. Tăl-amnyth.

Greek and Roman Weights.

| | | | | |
|---|---|--|---|---|
| 6 | { | Lens, <i>kÿrăbe.</i> Lept- <i>aurek.</i> Chalch-ă, <i>rĕ.</i> Sil- t, <i>rĕk.</i> Ob-ou- <i>trek.</i> | } | 6 |
| 7 | { | Script- <i>ak, traf.</i> Dra- <i>lf, ouraf.</i> —Sext- <i>oid, aurp.</i> Sicil- <i>azn, erp.</i> | } | 7 |
| 8 | { | Duell- <i>bol, uroi.</i> — Unc- <i>fip, roi.</i> — Libra- lefu, <i>lroi.</i> | } | 8 |

Proportions.

- 9 GRAINS English-*bif, re* make French-*alei,* Dutch-*apou.*
10 OUNCE has grains Avĕr-*ofei,* Troy-*fouz*³: as *eiÿ* to *oiï*⁴.
11 POUND Aver-heavier than Troy by 2 ounces, 4 drams, and 2 scruples.

Abbreviatures explained.

Bekah, 5. Carat, 2. Chalchos, 6. Drachma, 7. Duella, 8. Hundred-weight, 4. Lepton, 6. Maneh, 5. Obolus, 6. Penny-weight, 2. Pound, 2. Scriptulum, 7. Scruple, 2. Sextula, 7. Shekel, 5. Sicilicus, 7. Siliqua, 6. Talent, 5. Uncia, 8. Zuzah, 5.

Synonyms.

Gramma, scruple. Keration, siliqua. Lens, grain. Litra, libra. Quintal, hundred-weight. Sitarion, grain.



1 N.B. The *Grains*, us'd in weighing *Diamonds*, are somewhat lighter than those us'd in gold, &c.

2 i. e. 218, according to Bp. Cumberland: 268, according to father Mersenne.

3 So that the averdupois-ounce is less by 42 grains than the troy-ounce; which amounts to near a 12th part of the whole.

4 i. e. 73 ounces-troy make 80 ounces-averdupois.

ASTRONOMY.

MARCH,

The 1st Day, to find on what Day of the Week it happens.

- 1 The year, more 2 and even-4th, divide by 7:
- 2 By what remains (for 0 sat. 1 sund. and-sö-on) it is given.

E.G. *Ann. Dom.* $26 + 2 + 6$ (its even 4th) $= 34 \div 7$, remains 6: i. e. friday; accounting saturday 0, sunday 1, monday 2, &c.—*Before Christ*, reckon backward; viz. sunday 1, saturday 2, and so on to monday 0. e. g. *Bef. Ch.* $7 + 2 + 1$ (its even 4th) $= 10 \div 7$, remains 3; i. e. friday.—Of the other months to find the 1st day, and consequently what day of the week any day is; V. Signs.

MONTHS,

The Number of days in each, with the days of the Nones and Ides.

Ap Sē Nō June-iz¹: Mar-Mā Jūl Oc, no-p, id-al²; in the rest, l.at³.

1 February, it is well known, has 28 (in the leap-years 29), the rest 31.

2 i. e. The *Nones* are on the 7th day, the *Ides* on the 15; in these 4 months.

3 i. e. The *Nones* are on the 5th, the *Ides* on the 13th: in the rest.

MOON.

Cycle and Epact.

Golden's remainder of year-more-1, divided by 19¹.

Epact's the cycle into *ab*: above *iz* by *iz*, the remainder².

Change and Age.

New's the remainder of month-from-march and epact, less *iz*, *auz*³.

Ap. Se. No. Jun. less *en*—For Jan. Mar. o. Feb. Apr. 1 add.

Full's 15 days from the change—Waning, east; Growing, west is enlightened⁴.

Rising and Setting.

At Sun-set, sets *New*, rises *Full*; and, each day, minutes *ub* more.

Shining (in Waning) Subtract (in Encreasing) Add to Sun-rise,-set.

Southing and Tides.

Southing's the age into *ok* by 60: from *al*, the excess take⁵.

High-water at London-bridge: Two hours and a half after *Southing*⁶.

1 e. g. $1737 + 1 = 1738 \div 19 = 19$: remainder 9, for the cycle, or *Golden Number*.

2 e. g. $9 \text{ (the cycle)} \times 11 = 99 \div 30 \text{ (as being above 30)} = 9$: remainder 9 for the epact.

3 e. g. May 20 (1737) What is the moon's age? Answ. 3 (the number of the month from march, inclusively) + 9 (the epact) = 12—10 = 18: the day of the new moon, when it is said to change. So the moon, on the 20th of may, is 2 days old.

4 i. e. The Horns are turned, in *Decreasing* (from the Full) West-ward; in *Encreasing* (from the New) East-ward.

5 e. g. April 15 (1737) When comes the moon to the meridian? Answ. The moon's age is 26: the excess above (al) 15, is 11.

Then $11 \times 48 = 528 \div 60 = 8$ h. 48 m. for the Southing. — For the reader working, the rule may be thus expressed: "*Age into 4, by 5: into 12 the remainder gives minutes.*" e. g. $11 \times 4 = 44 - 5 = 8$ h: remainder $4 \times 12 = 48'$.

6 e. g. Apr. 15 (1737) the moon Souths at 8 h. 48. Then 8 h. $48' + 2$ h. $30' = 11$ h. $18'$. (N.B.) If the total amounts to more than 12, the excess shews the hour.

THE 12 SIGNS

or Portions of the Zodiac, named from Constellations once in them: their Names, Characters, and corresponding Months; with a Key to find the Sun's Place on any Day¹; and on what Day of the Week the 1st Day of any Month happens².

| | | | | | |
|----------|-----|----------------|----------------|---|-------------|
| 1 Ar | ma | n ¹ | a ² | ♈ | Aries |
| 2 Taur | apr | ou | f | ♉ | Taurus |
| 3 Gēmī | may | k | s | ♊ | Gemini |
| 4 Cance | jún | p | e | ♋ | Cancer |
| 5 Lě | júl | p | f | ♌ | Leo |
| 6 V | au | p | p] | ♍ | Virgo |
| 7 Līb | se | p | i | ♎ | Libra |
| 8 Sc | oc | s | ū | ♏ | Scorpio |
| 9 Să | no | p | ă | ♐ | Sagittarius |
| 10 Că | de | k | t | ♑ | Capricornus |
| 11 Aquă | ja | n | s | ♒ | Aquarius |
| 12 Pīscē | feb | ba | d | ♓ | Pisces |

1 The method is this: To the day of the month (+ 11 for the old style) add the number signified by the numerals *n*, *ou*, &c. the Sun (—30, if above 30) is in the degree of the sign corresponding to the day of the month. E. G. Feb. 10 + 11 (for the old style) + 11 (for the numeral *ba*) = 32 — 30 = 2° of ♈.

2 Thus: From the day on which March 1st happens (V. March) for any other month, count forward so many days as are signified by the numerals *a*, *f*, &c. E. G. Mar. 1st, 1737, was tuesday: therefore Apr. 1st [counting (f) 4 onwards, tuesday being one] is

friday : and, consequently, the 8th, 15th, 22d, 29th, are fridays ; whence may be known the rest. [N.B. Jan. and Feb. are reckoned from Mar. of the preceding year.

SUN,

The Time of its rising each Day.

1 Jän-o¹. 7 Febr-ei. 6 Mar-bÿ. 5 Apr-ou. 4 M-as†.
4 Júl-p. 5 Aug-at. 6 Sept-ad. 7 O . . be. 8 Na-l†.
†JUN-da, the Longest, i f²—the Shortest, ei boi,
DECEM-da†.

For the intermediate Days.

Sought, into 60, by All, gives Min. fewer 1st line,
more 2d³.

The Time of its Setting, each Month, &c.

Setting's the complement of rising to 12 ; and, doubled, the day gives⁴.

Cycle and Dominical Letter.

Cycle's the remainder of year-more-9 by ek⁵: if 0,
ek⁶.

ek cycle's A ; ep, B ; and so on⁷; e'ery 4th has 2⁵
(next
after these 3ds ; d E, au G, a-y B, bo D, aei F, de A,
dau C) and

FORMER is used till Feb-do, in Leap-years ; and, after,
the LATTER.

To find the Sun's Place in the Zodiac, V. Signs.

1 i. e. On Jan. 4. the Sun rises at 8.

2 i. e. On Jun. 21, New style (which is the Longest day) the Sun rises at 3 h. 43'.

3 i. e. The day sought (reckoned from the day of the Sun's rising) multiplied into 60, and divided by the number of All the days between the day of the Sun's rising (specified) in any month, and the day of its rising in the next, gives the Minutes fewer (or,

to be subtracted from, the hour specified) in the 1st line; more (or, to be added) in the 2d line.—e. g. Apr. 13, I would know when the Sun rises. By 5 Apr-ou I find that the day sought (reckoned from the day of the Sun's rising, viz. the 9th) is 4 [for $9 + 4 = 13$]. Then $4 \times 60 = 240$: and $240 \div 36$ (the number of AH the days from 5 Apr-ou to 4 M-as: i. e. from 9, the day the Sun rises at 5 in April; to 16, the day the Sun rises at 4 in May) $= 6'$ [and $\frac{24}{36}$ i. e. by reduction] $40'' = 5$ h. (the day it rises on the 9th of April) $= 4$ h. $53'$, $20''$, then, therefore the sun rises on that day, viz. Apr. 13.

4 Thus, Dec. 21, New style, the sun rises at 8 h. $17'$: the complement of its rising to 13 is 3 h. $43'$ [for 8 h. $17' - 12$ h. $= 3$ h. $43'$]. The sun therefore sets at 3 h. $43'$: and this, doubled, gives the length of the day, viz. 7 h. $26'$: shorter by 9 h. $8'$ than the longest; which (by the same calculation) will be found to be 16 h. $34'$.

5 e. g. $1737 \times 9 = 1746 \div 28 = 62$ (the number of revolutions since Christ) remainder 10, for the number of the cycle.

6 i. e. If there be no remainder, it will be (ck) the 28th, or last year of the cycle.

7 i. e. The dominical letter answering to the year of the cycle 28 is A; to 27, B; and so on (backwards) to G, the 7th and last: after which returns A, B, &c.

8 e. g. Every 4th (or Leap year^a) has 2 dominical letters: the latter of which is used after Feb. 24, the intercalary day; which is therefore denoted by the same letter as the 23d.—N.B. For the readier finding the dominical letter answering to any number of the cycle, I have given (in parenthesis) those of every third: thus (aei F) F answering to 18 (one of the 3ds there specified), 17 (the next 4th, reckoning backwards) will be G A; 16, B; 15, C; &c.

^a For the readier finding Leap-year, the rule is this: "Year-sought divide by 4; what's left will be, for leap-year, 0; for past, 1, 2, or 3." e. g. $1737 \div 4 = 434$: remainder 1, for 1st after leap-year.

CHRONOLOGY.

Roman Manner of Dating.

- (1) Kal. Non. Id. (2) Pridie. (3) Tert. quart: (nb)
 The day sought subtract from
One more than Ide-None-days; *Two* more than the
 months, for the Kalends.

I. (i. e.) For the days on which the Kalends, Nones, Ides of any month happen (V. Months) write (e. g.) *Kal. Dec.* on the kalends of december, viz. the 1st day of December, (2) On the day preceding each of them, write (e. g.) *Pridie Kal. Dec.* i. e. pridie kalendas decembris, on the day before the kalends of december, viz. the 30th of november. (3) For the days backward, write *Tertio, Quarto, &c.* i. e. on the 3d, 4th, &c.

II. To find any of the days, e. g.—(1) 10th of december. What, in the Roman style? Answ. $10-14$ (*One more than the days the ides happen on*)= 4 . i. e. 4to id. dec. Again (2) 4to id. dec. What, in the English style? Answ. $4-14=10$. i. e. the 10th of december.—(1) 20th of november: Say $20-32$ (*Two more than the number of the days in the month*)= 12 . i. e. 12mo. kal. dec. (2) 12mo. kal. dec. say $12-32=20$.

EPOCHAS.

Their Commencement in the Julian Period.

| World | <i>pauf</i> | 764 | of the World | <i>from the creation (A.M. or O.C.)</i> |
|---------------------|--------------|------|---------------|---|
| CHRIST ^b | <i>opaf</i> | 4714 | of Christ | <i>birth of Jesus Christ (A.D.)</i> |
| Act | <i>oski</i> | 4683 | Actian | <i>defeat of Antony at Actium.</i> |
| Agon. capit. | <i>opnou</i> | 4799 | Capitoline | <i>institution of the Capitoline games.</i> |
| Bâb | <i>doke</i> | 2482 | Babylonian | <i>beginning of the Assyrian monarchy.</i> |
| Cyr | <i>obki</i> | 4183 | of Cyrus | <i>end of the captivity under Cyrus.</i> |
| Del | <i>efan</i> | 2419 | Deluge | <i>Noah's universal Deluge.</i> |
| Dioclesi | <i>onnoi</i> | 4997 | Dioclesian | <i>persecution under Dioclesian.</i> |
| Exod | <i>iddp</i> | 3217 | Exodus | <i>Going of the Israelites out of Egypt.</i> |
| Heg | <i>util</i> | 5335 | Hegira | <i>Flight of Mahomet to Mecca.</i> |
| Indict | <i>uzel</i> | 5025 | Indictions | <i>institution of the Indictions.</i> |
| Juli | <i>ospa</i> | 4671 | of Julius | <i>reformation of the calendar under J. Caesar.</i> |
| Nâbon | <i>inaup</i> | 3967 | of Nabonassar | <i>reign of Nabonassar king of Babylon.</i> |
| Olympic | <i>inik</i> | 3938 | Olympic | <i>institution of the Olympic games.</i> |
| Philip | <i>atni</i> | 4393 | Philippic | <i>succession of Philip to Alex. the Great.</i> |
| Rom | <i>insa</i> | 3971 | Rome built | <i>building of the city of Rome (U.C.)</i> |
| Sel | <i>osyt</i> | 4403 | Contracts | <i>reign of Seleucus king of Syria, &c.</i> |
| Spanish | <i>ospan</i> | 4676 | Spanish | <i>defeat of the Spaniards by Calvinus.</i> |
| Troy | <i>tute</i> | 3532 | Troy taken | <i>taking of the city of Troy.</i> |
| Yezdegir | <i>ulof</i> | 5344 | Yezdegirdic | <i>death of Yezdegird king of Persia.</i> |

^b CHRIST born A.M. *fyzo*. Jew-*tpaud*. Greek, ecc-*long*: civil-*ulzon*.

To find

1. { *The year of the Julian period corresponding to any year in any Æra.*
 2. { *Any year of any Æra by the corresponding year of the Julian period.*
-
- 1) { JUL— for *After* add Comm-less-1— for *Afore* take from Comm.
 - 2) { ÆR— *After*, Comm-less-1 take for Corr — but *Afore*, Corr. from Comm.



1. *What year of the JULIAN Period is the year 1737* (1) before Christ? (2) after Christ? ———— *Answ.* (1) 1737 (before Christ) — 4714 (the year of the commencement of the Christian æra in the Julian period) = 2977. (2) 1737 (after Christ) + 4713 (the commencement-less-1) = 6450, the year of the Julian period.

2. *What year of the CHRISTIAN Æra is the year of the Julian period* (1) 2977? (2) 6450? ———— *Answ.* (1) 2977 (the year of the Julian period corresponding to the year of the æra sought) — 4714 (the commencement of the Christian æra) = 1737. (2) 6450 (the corresponding year) — 4713 (the commencement-less-1) = 1737.



* *For the Number of Years from the Creation to the Birth of Christ.*

——— The *Christian* vulgar æra commences in the year of the world 4004, jan. 1. [according to Helvicus, Isaacson, &c. 3948] ——— The *Jews* place the creation of the world, Later by 242 years, viz. in 3762, oct. 7 ——— The *Greek* historians, on the authority of the septuagint, Sooner by about 1490, or 1500 years, viz. the ecclesiastical, in 5494; the civil, in 5509.

FESTIVALS,

Holy-Days, Feasts, &c.

IMMOVEABLE.

Christ.

Nát-de, *du*¹, Círc-ja, *b*. Epiph-ja, *s*. Lámm-au, *b*.
HoRood-se, *bo*. Transf-au, *s*.

Mary.

Ann-mär, *el*. Púr-feb, *e*. Nat-se, *k*. Vís-jul, *e*. Cónce-
de, *k*. Ass-au, *al*.

Saints.

All-növ, *ä*. And-nov, *iz*. Bap-jun, *ef*. Bárnaby-jun, *ab*.
Barth-aug, *éf*. George-apr, *et*. James-jul, *du*. Innö-
cënt-dec, *dei*.

John-dec, *doi*. Luke-o, *ak*. Mark-ápri, *du*. Márti-
novemb, *ad*.

Mátt-se, *da*. Paul-jan-du. Pet-jun, *dou*. Phíl Jaco-
may, *a*.

Sim Jud-o, *ék*. Ste-de, *dau*. Tho-dec, *da*. Váentine-
feb, *af*.

Royal Family, 1737.

Cór-o, *ba*. PRÓCLA-jun, *ab*. BORN, King-o, *ty*: *seít*.
Queen-mar, *a*: *seid*.

Wáles-ja, *ty*: *pyp*. -cess-n, *ak*. AnOr-o, *de*: *pÿn*.
Ame-ma, *iz*: *pab*.

Car-ma, *iz*: *pát*. Will-apr, *al*: *peb*. Már-fe, *de*: *pet*.
Loui-d, *p*: *pef*.

Terms, as in 1737.

Terms hold weeks *al*: dáys Hilar-eb. East-ép. Trin-
dy, Mich-tau.

HIL from ján-di to feb-be—MICH from óc-do to
nov-ek

EAST, wéd-e áfter, begins: ends, áfter ascénsion,
mond-u.

TRIN, fríday áfter, begins; and ends 3d wédnesday
after.

Vac. holds weeks *toi*: dáys Hilar-oit. East-ap. Tr-abs.
Mich-us.

Quarterly.

Lády-mar,*el.* Midsum-jun,*ef.* Mich-sep,*dou.* Chri-dec,*al.*

State Holidays.

Fíre-sep,*e.* Powd-no,*l.* Márt-ja,*ty.* Réstor-may,*dóu.*
Revo-feb,*at.*

MOVEABLE.

*Before and after Easter.**

1 { Sept-st^o. Sex-us. Shrove-ón. Qua-fe. Lent-os.
Pál-p. Maund-i. Good Fri-d.

EASTER's the first Sunday after first Full-moon after March-da.

2 { Low-oi^o. Róga-tu. Asc-in. Whits-on. Trín-lau.
Ad-eta.

EMBER-days. We Fri Sát, after Quá Whit Ho Róod
Luci-dec, *at.*

EASTER TABLE.³

*Paschal-full-moons for the Golden-numbers, with the
Hebdomadal Letters.*

| | | | | | | | | |
|-----|----|---|------|-----|---|------|------|---|
| 1 A | l | d | 8 A | bei | c | 15 A | a | g |
| 2 M | el | g | 9 A | oi | f | 16 M | ea | c |
| 3 A | bi | e | 10 M | eo | b | 17 A | n | a |
| 4 A | e | a | 11 A | bu | g | 18 M | -eou | d |
| 5 M | ed | d | 12 A | f | c | 19 A | -boi | b |
| 6 A | by | b | 13 M | eo | f | | | |
| 7 M | iz | e | 14 A | be | d | | | |

Use of the Table.

Súm from Hebdóm to Domín (of the year sought)
add to the Month's day.⁴

Synonyms, &c.

Ash-wednesday, 1st day of lent. Candlemas, purification of the virgin M. Crucifixion, good-friday. Holy-thursday, maunday. Holy-week, last of lent. John the Baptist, midsummer. Parasceue, good-fri-

day. Passion-week, last of lent. Pentecost, whitsuntide, whitsontide. Processioning-day, ascension-day. Quinquagesima, shrove-sunday. Shor-(Shur-)thursday, maunday-thursday. Twelfth-day, epiphany.



1 i. e. The nativity of Christ is on *dec.* 25. and so of the rest.

2 i. e. — *Septuagesima*-sunday is (st) 63 days before Easter [70 before the octave of easter] — *Low*-sunday is (oi) 7 days after Easter, and so of the rest.

3 The *Easter-table* consists of 5 verses, each ending at a period-mark; and may be read thus: "One-ald, two-melg, three-*ābī* e. (four A *ē ā*, five-medd." &c.—Its Use is to find Easter-sunday for ever. V. n. 4.

4 e. g. A.D. 1737, the golden number is 9, the dominical letter B. then, against 9 (in the table) the hebdomadal letter is F. from thence to the dominical B. are (g a b) 3: which added to apr. 7 (the day of the month, in the table) gives apr. 10, for Easter-sunday. — So A.D. 1736, golden-number 8, 1st dominical letter C: then from C (in the table) to C (dominic.) 7 + apr. 18 = apr. 25.



GEOGRAPHY.

In the following verses (which contain as much, I think, as is necessary to charge the memory with by way of foundation) I have given the most general divisions of the several parts of the terraqueous globe; beginning, in each, with the most northerly parts, and, in descending southwards, proceed (to the right) from west to east: so that children, with a few hints and occasional helps, may be able to find them, by themselves, and thereby fix them better in their memory; after which they will easily get the verses by heart; and be well prepared to consult the gazetteer, or to go through any system, with pleasure, to good advantage.

LAND.

*Continents, Isles, Peninsulas, Isthmus, Capes,
Mountains.*

CONTINENTS.

Europe, Africa, Asia, and America.

AF (8) Bar (féz mor a tún tripo bárc) Bi (dar) Egý
(alex cair)

Zaár (zu) Ne (tómb) Nubi (dáng) Gui (ma why' be
lo cáng) Ethi (mon caf)

AM (23) Green Brít Wa La Cán Acad Eng Jers
Pén Mary Virg Car

Geor Kent. Flór (aug pens) Mex (guád mi ta jú
chi guat hon ver)

Firm (pa ca már venez ánd gra po cóm dari) Pér
(quito lím charc)

Am: Brăși (sál seba vin) Chil (já) Para (guai tucu
plat) Mag

AS (5) Tăr (ă síb che thi) Túr k (tu na cúrd sy di
ár) Pe (der isp gomb)

Ind (mōg āg beng: vis go bi mál: pe to sí co) Chi
pek nank

EUR (18) Nor-berg. Swede-stock. (Scot-ed'n. Ire-
dúblin. E-london)

Dén-cōp. Höl-amst. Fland-brúss. Ge-viên. Po-na.
Russ-petre: France-par.

Switz-basil. Húng-presb. Port-lisb. Spáin-mad. Itál-
ro. Tu-constant.

AFRICA.

Barbary comprehends the kingdoms of Fez, Mo-
rocco, Algiers, Tunis, Tripoli, Barca. *Bildulgerid*:
Daara. *Egypt*: (ch. cit.) Alexandria, Cairo. *Zaara*:
(ch. prov.) Zuenziga. *Negroland*: Tombute. *Nu-
bia*: Dangola. *Guinea*: Malaguette, Whydaw, Be-
nin, Loango, Congo, Angola. *Ethiopia*: Monemugi,
Monomotapa, Caffraria.

AMERICA.

Greenland, New-Britain, New-Wales, Labrador,

Canada, Acadia or Nova Scotia, New-England, New Jersey, Pennsylvania, Maryland, Virginia, Carolina, Georgia, Kentucky. Florida (ch. towns) *St. Augustine, Pensacola. Mexico:* (ch. prov.) *Guadalajara, Mechuacan, Tabasco, Yucatan, Chiapa, Guatimála, Honduras, Verágua. Terra-Firma:* *Panama, Carthagéna, St. Martha, Venezuela, Andalusia, Granada, Popayan, Comana, Darien. Peru:* *Quito, Lima, Los-Charcos. Amazonia. Brasil:* (ch. cit.) *St. Salvador, St. Sebastian, St. Vincent. Chili:* *St. Jago. Paraguay:* (ch. prov.) *Guaira, Tucuman, Rio-de-la-Plata. Terra-Magellanica.*

ASIA.

Tartary: (ch. prov.) *Astrachan, Siberia, Chenyang, Thibet. Turkey:* *Turcomania, Natolia, Curdistan, Syria including Palestine, Diarbec, Eyraco-Arabie. Persia:* (ch. cit.) *Derbent, Ispahan, Gombroon. India:* (ch. prov.) *empire of the Great Mogul (Agra, Bengal) Visiapour, Golconda, Bisnagur, Malabar, Pegu, Tonquin, Siam, Cochinchina. China:* (ch. cit.) *Pekin, Nankin.*

EUROPE.

Norway: (ch. cit.) *Bergen. Sweden:* *Stockholm. Scotland:* *Edinburgh. Ireland:* *Dublin. England:* *London. Denmark:* *Copenhagen. Holland:* *Amsterdam. Flanders:* *Brussels. Germany:* *Vienna. Poland:* *Warsaw. Russia:* *Petersburgh. France:* *Paris. Switzerland:* *Basil. Hungary:* *Presburg. Portugal:* *Lisbon. Spain:* *Madrid. Italy:* *Rome. Turkey:* *Constantinople.*

Capes, Islands, Peninsulas, and Mountains.

CAPES: *La Li St-éng. Fi Vi-spáin. Bla Ve Góod-afri. Cóm-malab. Horn-fueg.*

ISLES: Zě-den. Az-pő. Să Síc Ca Cy-méd. Ma Ca-bárb. He-gui. Mad-eth.

Mald Ceyl Súm Bo Su Jáv Phi Mo Ladr-ind. Newf-lá. So-south-seas.

Bér-flo. Bu Cú Jam Hi Ríc, Carib (ánt ne mo barb) mex. Fueg-mag.

PEN: Jü-de. Mó-gre. Pre-tárt. Afri. Cábmb. Malac-ind. Mex-amer-north.

MOUNT: Chěvī-scot. Pyr-spain. Alps-ít. Cauca-tárl. Apalach-n-am.

CAPES.

Land's-end, Lizard, Start-point (of) *England*. Finisterre, St. Vincent's, *Spain*. Blanco, Verd, Good-Hope, *Africa*. Comorin, *Malabar*. Horn, *Fuego*.

ISLES.

Zealand (in) *Denmark*. Azores (west of) *Portugal*. Sardinia, Sicily, Candia, Cyprus (in the) *Mediterranean*. Madeiras, Canaries (against) *Barbary*. St. Heléna, *Guinea*. Madagascar, *Ethiopia*. Maldives, Ceylon, Sumatra, Borneo, Sunda, Java, Philippines, Moluccas, Ladrones, *East-Indies*. Newfoundland, *Labrador*. Society-Isles (in the) *South-Seas*. Bermudas (against) *Florida*. Bahamas, Cuba, Jamaica, Hispaniόla, Porto-Rico: Caribbees (Antigua, Nevis, Montserrat, Barbadoes) *Mexico*. Fuego, *Terra-Magellanica*.

PENINSULAS.

Jutland (in) *Denmark*. Morea, *Greece*. Precop, *Tartary*. Africa. Cambaya, Malacca, *East-Indies*. Mexico, *North-America*.

MOUNTAINS.

Cheviot (between) *Scotland* and *England*. Pyrenees, *Spain* and *France*. Alps, *Italy* and *France*. Caucasus (in) *Tartary*. Apalachian, *North-America*.

WATER.

Oceans, Seas, Gulfs, Straits, Rivers, and Lakes.

OCEANS: Hyp. Ethi. East. Alt-West. Paci-South-del Zur. Ice.

SEAS: Ba de-Swede. Chan-éng. Med-eu,áfr. Black-eu,as. Casp-tartar.

GULFS: Bo Fi-swéde. Ven-ital. Red-arab. Pers. Béng. Baff Hu-north-am.

STRAITS: Sound-bált. Gi-med. Hét-bla. Ba-réd. Sun-in. Húd-bu. Da-baff. Mag.

LAKES: Lad O-russ. Ne Lo-scot. Ge Lu-switz. Baba-pérs. Bo-ne. Par-firm.

RIV. Vö-că. Dan-bla. Rhi-ger. Rh Eb Níl-me T. Eu-pers. Ga-be. Mis-mex.

OCEANS.

Hyperborean or northern. Ethiopian. Eastern. Atlantic or western. Pacific or south, or mare del Zur. Icy near the South Pole.

SEAS.

Baltic, east of *Denmark* and *Sweden*. Channel, south east of *England*. Mediterranean, between *Europe* and *Africa* and part of *Asia*. Black sea, between part of *Europe* and *Asia*. Caspian, in *Great Tartary*.

GULFS.

Of *Bothnia* and of *Finland*. in *Sweden*. Of *Venice*, east of *Italy*. Red-sea, between *Arabia* and *Africa*. Persian Gulf. Bay of Bengal in *Asia*. Baffin's and Hudson's Bays in *North America*.

STRAITS.

Sound (of the) *Baltic*. Gibraltar, *Mediterranean*. Hellespont, *Black-sea*. Babelmandel, *Red-sea*. Sunda, *Indian-ocean*. Hudson's, *Button's-bay*. Davis's, *Baffin's-bay*. Magellan, *South America*.

LAKES.

Ladoga and Onega, western part of *Russia*. Loch-Ness and Lomond (in) *Scotland*. Lakes of Geneva and Lucern, *Switzerland*. Babacombar, *Persia*. Bornou, *Negroland*. Parime, *Terra Firma*.

RIVERS.

Volga (falls into the) *Caspian-sea*. Danube, *Black-sea*. Rhine, *German-ocean*. Rhone, Ebro, Nile, *Mediterranean*. Tigris, Euphrates, *Persian-gulf*. Ganges, bay of *Bengal*. Mississippi, bay of *Mexico*.

A more particular account

of the several countries of Europe may be exhibited, so as to give a precise idea of the situation of each sub-division, after the manner of the following specimen : in which (beside what was proposed in general, note 1.) such as are contiguous *Southward*, are *joined* ; as in weLa- : such as are contiguous *Westward*, are *hyphened* ; as in Che-De- &c.

ENGLAND.

Its Forty Counties.

Nor cum-dúr: weLa-yórk: che-de-not-linc: shróp-sta-le-rut norf:

Hér-wo-wa-nórtha: Bed-hunt-cámb-suff: mon-gl-óxfo-buck-hert-ess.

Som--wilt--bérk--middlesex: corn--dev--dors--hámp-surrey-kentSuss.

FIRST MERIDIANS

On either Side of Teneriffe.

(Eást) London-as (West) Fer-d. Jag-s. Nícol-oi. Corvó-bei. Bras-bou.

Abbreviatures.

Ferro. St. Jago. St. Nicholas, coast of Brasil.

The Dutch placed the first Meridian at Teneriffe; the French, since 1634, at Ferro, two degrees west of Teneriffe: others variously, as in the memorial verse. In most of the French maps and those copied from them two degrees must be allowed on such as are calculated on the Dutch plan to make them correspond; as for example, Hamburgh is there said to be *long.* $29^{\circ} 20'$ E. consequently in the French maps it will be found in $31^{\circ} 20'$, and in similar manner are all the rest. Many modern geographers usually now calculate the first Meridian from the capital city of the state in which each resides: the English reckon from the Royal Observatory at Greenwich near London; the North Americans from Philadelphia, situated $75^{\circ} 8'$ W. from London; and several of the French from Paris $2^{\circ} 20'$ E. of London.

HISTORY.

BIBLE.

The several Books of it, with the time of their writing.

OLD TESTAMENT.

Its 39 Books.

Elîh-jöb; ápty¹. Mo-pent: bog. Jósh: boly. Sám-ju-ki: bazy.

Dáv: byly. Sol-pro-can-ecc: ath. Mórd-e: toz. E'z-chr: ety. Neh: eg.

Prophets.

Jón: kse. Jo: eig. Am: peíp. Hose: oieil. Is: páuy. Nah: puk.

Mic: put. Jér: sta. Zeph: áutz. Haba: syn. Ezë: loul. Obadi-lkoi.

Dániel: ull. Hag: léz. Zechari: udz. Málachi: touoi.

NEW TESTAMENT.

Its 27 Books.

Matt-fa.² Mar-ot. Thess-lét. Pe-lo. Gal Cor Róma-loi. Luke-sa.

Phíl Col Ephés Phile Jáme-se. Heb Act-si. Tímothy Tít-su.

Tim Peter-aup. Jude-pá. Revel-ous. John-noí.—
³doi in iau.



1 i. e. *Elihu* is more probably supposed to be the author of the book of *job*, about 1730 years before the birth of Christ. So, *Moses*, the author of the *pentateuch*, flourished in the year before Christ 1400. And so of the rest.—N. B. *Ezra* is thought by the Jewish doctors to have writ the *chronicles* [the 36th chapter of *Genesis*, the last of *Joshua* and *Jeremiah*; and to have revised and settled the canon of the Old Testament.]

2 i. e. *Matthew* writ his Gospel about the year of our Lord 41. And so of the rest.

3 i. e. 27 books (from the year 41 to 97) in 36 years.

ENGLAND.

Its Kings, since the Conquest, with the Commencement of their Reigns.

WILL Conq-sau,¹ Ruf-koi. HEN 1st-ag. STEPH-bil.
HE sec-buf.

RICH 1st-bein. JOHN-ann. HEN 3d-das. EDWARD
1st-doid.

Ed 2d-typ, 3d-tép. Rı sec-ipp. HEN 4th-toun,
5th-fat,

6th-fed. Ed 4th-faub, 5th, Rı 3d-feit. HE 7th-feil,
8th-lyn.

ED 6th-lóp. MARY-lut. ELS-luk. JAME 1st-syt. Că
1st-sel.

CAR 2d-són. JAME se-seil. WILL MA-sein. ANN-py'd.
Geo-paf, pep.

1 i. e. *William* the conqueror began his reign (accounting the year to begin January 1) A. D. 1066.——N. B. 1000 is omitted throughout this list.

MONARCHIES.

*The grand or universal ones, their Rise, Fall,
and Continuance.*

ASS: Nīn(A.M.)-āpók, Sar-tetú (BAB-īfan, PERS-táuboi, GREC-isel ÷

Cáss-ma-gre. Lys thrac-he-bós. Ptolem aé-lib-a-pál-sy. Seleuc as.)

ROM: Jül-iny'd, Jov-otat ÷ East, Wést: taken Cón-loze, Rom-otun:

Alar(A.D.)-obz. Attī-flă. Géns-ful. Od-ops. Theód-oni. Tot-lop.

i. e. The——Assyrian Monarchy begun in *Ninus* (A. M.) 1748, and ended with *Assaraddinus* in 3235; being swallowed up by the *BABYLONIAN*, which ended (with *Nabonadius*) in 3419, (when *Cyrus* reigned over all Asia,) so the kingdom was translated to the *PERSIANS*: from whom (by the conquest of *Darius Codomannus*) in 3617, *Alexander* translated it to the *GRECIANS*: after whose death, in 3625, it was (÷) divided (after the confusion of a few years) among four of his followers. *Cassander* had *macedon* and *greece*: *Lysimachus* had *thrace*, with those parts of Asia that border on the *hellespont* and the *bosphorus*: *Ptolemy* had *ægypt*, *libya*, *arabia*, *palestine*, and *cælosyria*: *Seleucus*, all the rest of *asia*. The——Roman monarchy begun with *Julius Cæsar*, in 3902; and ended in *Jovian* in 4313: after whose death it was (÷) divided into the *Eastern*, and *Western* empires: the former of which ended by the taking of *Constantinople* (under *Constantine Palæologus*) in 5402; the latter by the taking of *Rome* (under *Honorius*) in 4359, A. D. 410, by *Alaric*, king of the *Goths*: after whom it was overrun and ravaged by *Attila*, king of the *Huns*, in 451; by *Genseric*, the *Vandal*, in 455; by *Odoacer*, king of the *Heruli*, in 476; by *Theodoric*, king of the *Ostrogoths* in 493; *Totilas*, the *Ostrogoth*, in 547.

WAR.

Bodies of Soldiers.

R] Déc-by. Cen-ázy. Man-eg. Turm-ig. Cohor-áug.
Legi-auth. Ph-eith.

E] Comp-uz,ag. Squad-ag,eg. Ba-lg,eíg. Brigad-
áth,bag. Reg-ig, auth.

1. The ROMAN *Legion* consisted of (at a medium) 6000 men : though the number was different, at different times, from 3000 to 6666. And, in proportion, the other bodies, viz. *Decuria*, 10. *Centuria*, 100. *Manipulus*, 200. *Turma*, 300. *Cohors*, 600. *Phalanx*, 8000.

2. AN ENGLISH *Regiment* is from 300 to 1000 men. And, in proportion, the other bodies, viz. *Company*, 50-100. *Squadron*, 100-200. *Battalion*, 500-800. *Brigade*, 1000-1100.

NATURAL PHILOSOPHY.

PHYSICS.

ANNUITIES.

Their Value, for several Ages of Life.

A-bz-dei¹. Az-bí,fo. Ez-bě,pei. Iz-bă,pe. Oz-ăz,úp.
Ol-n,oub.

Uz-ou,eb. Ul-k,ub. Auz-oi,sy. Aul-ău,lo. Oiz-l,id.

1 i. e. for (A) 1 year of age, the value of an annuity is (bz,dei) 10,28 years purchase. And so of the rest. V. Halley, ap. Lowthorp, vol. iii. p. 669.

ARKS.

Of Noah, and of the Covenant or Testimony, their Dimensions in Cubits.

(Cov) L-e,re. Br-á,re. D-a,ré. (NOAH) L-ig. Br-uz.
D-íz; for Birds-eg, Qu-ag.

i. e. The *Ark*—of the *COVENANT* was a sort of Chest in Length, Breadth, Depth, $2\frac{1}{2}$: $1\frac{1}{2}$: $1\frac{1}{2}$.—of *NOAH* was a sort of Ship, 300: 50: 30: sufficient to hold (with food, &c.) all kinds of *Birds* (viz.) 200; *Quadrupeds*, 100. Vide Gen. vi. 15, Exod. xxv. 10.

ATMOSPHERE.

Its Height, Weight, Elasticity, &c.

Atmosphere (HIGH miles—6z¹) on a foot-square presses *esauz* pounds;

On 15 feét (for a man) tuns—al: when leást, tun—*a, re less*²;

WEIGHING as 1 —to (water) *eig* —to (mercury) *azth eig*³.

CÓMPREST, on Eárrh, to *atpaun*⁴; by Art, 60 tímes more, to *kesboz*.

1 As appears by a calculation, made by M. de la Hire, from the crepuscula.

2 As appears by calculations made from the Torricellian experiments. V. Jurin, ap Varen. 1. 6. 19. 7.

3 i. e. The weight of air compared to that of water, is as 1 to 800, &c. V. Hauksbee's Exper.

5 i. e. The common air we breathe, near the surface of the earth, is compressed, by the bare weight of the incumbent atmosphere, into a 13769th part of the space it would take up, were it at liberty. V. Boyle, ap. Wallis, hydrost. 13. Philos. Trans. n. 181.

DIVISIBILITY

Of Matter, actually great.

By great EFFLUVIA, in a long tíme, bodies lóse but a small weight.¹

Candle, an inch, converted to LIGHT,—gives párts a nonillion.²

1 As is evident in perfumes, &c.

2 At which rate there must fly out of it, as it burns, in the second of a minute, 418,660,000.000.000.000.000.000.000, 000 000,000.000,000 particles: vastly more than a 1000 times a 1000 millions the number of sands the whole earth can contain; reckoning 10 inches to 1 foot, and that 100 sands are equal to 1 inch. V. Nieuwent. Rel. Phil. vol. iii. p. 858.

DUCTILITY

Of Bodies, very great.

Microscópicál SPIDERS¹ spin at-a-tíme, at least, threads-auth.

GLASS may be dráwn² as a web, and knit to the 4th of a line space³.

GOLD, on Silver-wire, is drawn⁴ to the párt of an inch-bom.

1 i. e. Such as are not visible but by a microscope.

2 "As fine as a spider's web;" but not long enough to be woven.

i. e. So, that the space in the middle of the knot shall not exceed one 4th of a line, or one 48th of an inch.

4 "To the 14-millionth part of an inch, in thinness:" and yet is so perfect a cover to the silver, that there is not an aperture to admit alcohol of wine (the subtilest fluid in nature) nor even light itself, Reaumur.

EVAPORATION

From Water, its Quantity.

Foot-squäre, bý héat, in a day, éváporates hálf of a wine pint¹.

So, Medi tuns-udký'm²; near a thírd more than's brought by the rivers³.

1 According to experiments made by Dr. Halley, ap. Miscell. Curios. vol. 1. To which it may be added, that the winds do sometimes carry off more than rises by heat.

2 Estimating the *Mediterranean* at 40 degrees long, and 4 broad.

3 V. Rivers. and, consequently, from the whole watery surface abundantly enough to furnish all the dews, rains, springs, rivers, &c. that are conveyed into the ocean.

MAN.

Life, Marriage, Parts, Perspiration.

LIVE, out of *ág*, but—at *Aú*, so¹ —at *As*, *fy*—*ät*
Es, *bü*—*ät* *Is*, *bau*
 &—at *Os*, *áz*—*ät* *Us*, *au*—&—at *Aus*, *ĩ*—*ät* *Ois*, *a*.

MARR. *a* in *ázf*²: *bir-f*³ (to *búr* as *a,áu* to *a*⁴)
máles-bo to *fem-at*⁵.

BONES-*eni*. MUSCLES-*len*. TEETH-*íd*—BLOOD as *ag*
 to *aauy*⁶,

Béats, in an hour, times-*óth*: and an ounce, at a
 time, is discharged⁷:

52 feet in a minute; as *sept-ag* to 1 in the ex-
 tremes⁸.

PERSPIRE through póres (*belth*-whereof by one grain
 of *sánd* may be covered)

5 parts of 8 (*á dáy's food*) from hours 5, after méals,
 to the 12th; 3⁹.

1 i. e. Of the children born, out of 100, there are living, at 6 years of age, but 64. And so of the rest. V. Halley, ap. Lowthorp, vol. iii. p. 669.—N.B. On observations of this nature, drawn from the bills of mortality, is computed the value of *annuities* for different ages of life. V. Annuities.

2 i. e. 1 in 104 *Marry*. King.

3 i. e. Marriages, one with another, do each produce 4 births. Derham.

4 i. e. *Births* to *Burials* are as 1, 6 to 1. Derham.

5 i. e. *Males*, born, to *Females*, are as 14 to 13. Graunt.

6 i. e. In a body, weighing 160 pound, 100 thereof are *Blood*; understanding thereby not only the fluid contained in the veins and arteries; but also that in the lymphæ-ducts, nerves, and the other vessels, secreted from it, and returned into it. Keil.

7 i. e. 250 pounds in an hour; at the rate of the whole mass, in 24 minutes.

8 i. e. The blood is driven out of the heart into the great artery with a velocity, which would carry it 52 feet in a minute: a velocity to that of its motion in the remotest branches, as 100 septillions [7th period] to 1.

9 Within 5 hours after eating, there is perspired about 1 pound; from the 12th to the 16th scarce half-a-pound. Sanctorius.

RIVERS.

The Quantity of their Waters.

At Kingstön-bridge, THAMES (yards Broad-ág, Deep-î)
2 mile an hour Runs¹:

tuns-ezm igh in a day; rh e ti po ni do niest nieper
akdoim².

1 In a day, 48 miles, 84,480 yards; which multiplied by (3 times 100, the profile of water at the bridge, viz.) 300 yards, gives 25,344,000 cubic yards of water, i. e. 20,300,000 tuns.

2 The most considerable rivers that fall into the MEDITERRANEAN sea are the *Rhone, Ebro, Tiber, Po, Danube, Nile, Don, Niester, Nieper*. Each of these is supposed to carry down 10 times as much water as the Thames, (not that any of them is so great; but so to allow for the other lesser rivers that fall into that sea.) Now the water of the Thames being computed, as above, at about 20,300,000 tuns; the 3 rivers aforesaid will amount, each, to 203,000,000; in all, 1,827,000,000 tuns. V. Evaporation.

MEMORIAL VERSES,

ADAPTED TO THE GREGORIAN ACCOUNT, OR NEW STYLE.

To know if it be Leap Year.

Leap Year is given, when four will divide
The cent'ries complete, or odd years beside.

EXAMPLE FOR 1752.

4)52(0, Leap Year

—
13

EXAMPLE FOR 1800.

4)18(2, not Leap Year

—
4

To find the Dominical Letter.

Divide the cent'ries by four; and twice what does
remain

Take from six; and then add to the number you
gain

The odd years and their fourth; which, dividing by
seven,

What is left take from seven, and the letter is given.

EXAMPLE FOR 1752.

4) 17 (1

— 2

4—

2

6

—

4

52

13

— 7

7) 69 (6

— —

9 1 = A.

By the Dominical Letter, to find on what Day of the Week any Day of the Month will fall throughout the Year.

At Dover dwells George Brown, Esquire,
Good Christopher Finch, and David Frier^a.

EXAMPLE FOR MAY 9, 1752.

A being the Dominical Letter.

1 May = B = Monday

7

—
8 = Monday

1

—
9 = Tuesday.

^a See this noticed at page 94.

*To find the Golden Number, Cycle of the Sun, and
Roman Indiction.*

When one, nine, three, to the year have added been,
Divide by nineteen, twenty-eight, fifteen:
By what remains each cycle's year is seen.

EXAMPLES FOR 1752.

| | |
|---|--|
| $\begin{array}{r} 1752 \\ 1 \\ \hline 19)1753(92 \\ 43 \\ \hline 5 = \text{G. No.} \end{array}$ | $\begin{array}{r} 1752 \\ 9 \\ \hline 28)1761(62 \\ 81 \\ \hline 25 = \text{Cy. S.} \end{array}$ |
|---|--|

$$\begin{array}{r} 1752 \\ 3 \\ \hline 15)1755(116 \\ 25 \\ \hline 105 \\ 15 = \text{Rom. Indict.} \end{array}$$

A general Rule for the Epact.

Let the cent'ries by four be divided; and then
What remains multiplied by the number seventeen;
Forty-three times the quotient, and eighty-six more
Add to that; and dividing by five and a score;
From eleven times the prime, subtract the last quote;
Which, rejecting the thirties, gives th' epact you sought.

EXAMPLE FOR 1752.

$$\begin{array}{r}
 4)17(1 \quad \text{G. No.} = 5 \\
 \underline{\quad} 17 \quad \quad \quad 11 \\
 \quad 4 \quad \quad \quad \underline{\quad} \\
 \quad 43 \quad \quad \quad 55 \\
 \underline{\quad} \quad \quad \quad 11 \\
 172 \quad \quad \quad \underline{\quad} \\
 86 \quad \quad \quad 30)44(1 \\
 17 \quad \quad \quad 14 = \text{Epact.} \\
 \underline{\quad} \\
 25)275(11
 \end{array}$$

To find the Epact till the Year 1900.

The prime wanting one, multiplied by eleven,
And the thirties rejected, th' epact is given.

EXAMPLE.

$$\begin{array}{r}
 \text{G. No.} = 5 \\
 1 \\
 \underline{\quad} \\
 4 \\
 11 \\
 \underline{\quad} \\
 30)44(1 \\
 14 = \text{Epact.}
 \end{array}$$

To find Easter Limit, or the Day of the Paschal Full Moon, from March 1, inclusive.

Add six to the epact, reject three times ten,
What's left take from fifty, the limit you gain :

Which if fifty, one less you must make it, and even
When forty-nine too, if prime's more than eleven.

EXAMPLE.

Epact = 14

6

—
20

50

—
30 = Limit.

To find Easter Day.

If the letter and four from the limit you take,
And what's left from next number, which sevens will
make;

Adding then to the limit what last does remain,
You the days from St. David's to Easter obtain.

EXAMPLE.

Limit = 30 A = 1

5 4

—
25 A = 5

28 = next Sevens

—
3

30 = Limit

—
33 Days

31 = March

—
April 2 Easter Day.

R 3

To find the Age or Change of the Moon.

Janus 0, 2, 1, 2, 3, 4, 5, 6,
8, 8, 10, 10, these to the epact fix,
The sum, bate 30, to the month's day add,
Or take from 30, age, or change, is had.

EXAMPLE, MARCH 10, 1752.

Ep.=14

1=No. of the Month

—
15

10=Day of the Month

—
25 Days=Moon's Age.

30

15

—
15 March = Change.

*To find the Time of the Moon's coming to the South,
and of High Water at London Bridge.*

Four times the moon's age, if by five you divide,
Gives the hour of her southing : add two for the tide.

EXAMPLE.

Moon's Age, 9 days

4

—
5)36(7 h.

1

12 m= $\frac{1}{2}$ h.

7 h. 12 m. p. m.=Southing.

2 12=High Water.

—
9

APPENDIX.

REPETES MOX ; SIVE EST NATURÆ HOC, SIVE ARTIS.

Sat. iv. lib. 2.

HORACE in the above words alluded to the Art of Memory (Mnemonica) more than once praised by Cicero, who has also given precepts for the improvement thereof, in the third book of Rhetoric addressed to Herennius, where he says, “the Art consisted of fixing in the mind, upon certain conspicuous places, and on images formed of the things to be remembered and that were applied in order to those places; which last mentioned served instead of paper, and the images as so many words, whose regular application performed the office of writing.” Quintilian likewise mentions Mnemonics in his Institutes of an Orator, and Pliny notices them in his Natural History, though the original inventor was the Greek poet Simonides, who at a feast recited a poem, in honour of Scopas, victor in wrestling at the Olympic games, who gave the entertainment, but having digressed in praise of Castor and Pollux, his patron would pay only half the sum promised, saying he must get the other part from those deities who had an equal share in his performance. Immediately after Simonides was told that two young men on white horses must needs speak with him. He had scarce got out of the house, when the room fell down, all the persons in it were killed, and their bodies so mangled, that they could not be known one from another: upon which Simonides recollecting the place where every one had sat, by that means distinguished them. Hence it came to be observed, that to fix a number of places in the mind in a certain order, was a help to the memory. This action of Simonides was afterwards improved into an art, the nature of which is this: form in the mind the idea of some large place or building, divided into a great number of distinct parts, ranged and disposed in order: frequently revolve these in your thoughts, till able to run them over one after another without hesitation, beginning at any part: then impress upon your mind many images of living

creatures, or any other sensible objects most likely to be soonest revived in the memory. These, like short-hand, or hieroglyphics, must stand to denote an equal number of other words, not otherwise so easily to be remembered. When therefore you have a number of things to commit to memory in a certain order, place these images regularly in the several parts of your building: and thus, by going over those parts, the images placed in them will be revived in the mind; which will give the things or words themselves in the desired order. The advantage of the images seems to be, that, as they are more like to affect the imagination than the words, they will be more easily remembered. Thus, if the image of a *lion* be made to signify *strength*, and this word be one of those I am to remember, and is placed in the porch; when, in going over the several parts of the building, I come to the porch, I shall sooner be reminded of that image than of the word *strength*. This is the artificial memory both Cicero and Quintilian speak of; but seems, indeed, a laborious way, fitter for assisting to remember any number of unconnected words than a continual discourse. Grecian orators also made use of the statues, paintings, ornaments, and other external circumstances, of the places where they harangued, for reviving, in progressive order, the topics and matter of their orations; and though among the Latins, Cicero averred that Mnemonics were the basis of his excellent memory, and their practice was cultivated by others of whom Hortensius, Crassus, Julius Cæsar, and Seneca, are particularly noticed, yet it is not known that any modern orator has made use of this art; however, in allusion to it, we still call the parts of a discourse *places* or *topics*, and say, *in the first place, in the second place, &c.*

The science appears to have lain dormant in after ages, till Raimond Lullé, about the close of the thirteenth century, brought it once more into notice, and it has ever since been called 'Lullé's Art.'

Scepsius-Metrodorus, Carneades, Hippias, and Theodectes, among the ancient Greeks, practised or wrote upon this method. The principal Romans are mentioned above. The writers upon the art, from the time of Lullé to near the end of the seventeenth century, principally consisted of Marsilius-Ficinus, Grataroli, Bruschi, Muretus, Schenkel, Martin-Sommer, Horstius, Johnston, Morhof, and Paschius; with Gebelin in the eighteenth.

Muretus declares that he dictated between two and three thousand unconnected Greek, Latin, or barbarous words, to a young Corsican practising that art, who immediately spoke them regularly in order, and afterwards repeated the same backwards without any error, asserting that he would undertake to say thirty-six thousand words in a similar manner.

Lambert or Lamprecht Schenkel, born at Bois-le Duc, in 1547, acquired celebrity for his discoveries in the Mnemonic art, and to propagate these, he travelled through the Netherlands, Germany,

and France; where his method was inspected by the great, and transmitted from one University to another. Schenkel brought himself through every ordeal, to the astonishment and admiration of his judges. The rector of the Sorbonne, at Paris, permitted him to teach his science at that University; and Marillon, Maitre des Requêts, gave him an exclusive privilege for practising Mnemonics throughout the French dominions. His auditors were, however, prohibited from communicating this art to others, under a severe penalty. Schenkel delegated the licentiate Martin Sommer, and invested him with a regular diploma for circulating his art, under certain stipulations, through Germany, France, Italy, Spain, and the neighbouring countries. Sommer now (1619) published a Latin treatise on this subject, under the title of "*Brevis Delineatio de Utilitatibus et Effectibus admirabilibus Artis Memoriae.*" In this he announces himself as commissioned by Schenkel, to instruct the whole world.

"A lawyer, says he, who has causes to conduct, may, by the assistance of my Mnemonics, stamp them so strongly on his memory, that he will know how to answer each client, in any order, and at any hour, with as much precision as if he had but just perused his brief. And in pleading, he will not only have the evidence and reasonings of his own party at his fingers' ends, but all the grounds and refutations of his antagonist also! Let a man go into a library, and read one book after another, yet shall he be able to write down every sentence of what he has read many days after at home. The proficient in this science can dictate matters of the most opposite nature, to ten, or thirty writers, alternately. After four weeks' exercise, he will be able to class twenty-five thousand disarranged portraits within the space of a few minutes."

The Art of Memory is little more than the art of attention; and this method of it, which appears more connected with Egyptian hieroglyphics than has generally been thought, seems to consist in nothing else but a certain method of coupling or associating the ideas of things to be remembered, with the ideas of other things, already disposed orderly in the mind, or that are before the eyes.

Many have been the attempts to assist the memory. Some have had recourse to medicine, such as Horstius, Marsilius-Ficinus, Johnston, and others. That good health, a good digestion, and a mind free from care, are helps in this respect, is an old observation. That attention, application, frequent recapitulation, are necessary, is known to every one. But whether, besides natural health, and parts, and the exercise of our faculties, art may not give a further assistance to memory has been a question.

Within the present century this science has been revived and greatly studied in Germany and France; Dr. Klüber published at Erlangen, in the year 1802, a German translation, illustrated by notes of "*Gazypholium Artis Memoriae per Schenkelium,*" which the Doctor has entitled "*Compendium of Mnemonics, or the Art*

of Memory, at the beginning of the seventeenth Century, by L. Schenkel and M. Sommer;" but the modern restorer of this art is M. Aretin, who exacted from his pupils a promise not to write down his lectures; and though he permitted one pupil, M. Kaestner, to teach at Leipsic, yet it was on the express condition of not allowing his hearers to write. According to a book, said to have been composed by a child of twelve years of age, in the catalogue for the September fair at Leipsic, 1806, Mnemonica may be so taught as to give a memory to individuals of every age.

In France, the celebrated astronomer M. de Lalande bears testimony to the following facts: "I have witnessed the extraordinary effects produced on the memory by the method of M. de Feinaigle: one of his pupils is able to repeat, in any order, without the least mistake, a table of fifty cities in all parts of the world, with the degrees of longitude and latitude in which they are situated; the same is the case with chronology: in the *Annuaire* I have inserted 240 dates from ancient and modern history, and M. de Feinaigle's scholars repeat them all—an astonishing aid in the study of geography and history!"

Neither has this science been unattended to in Great Britain; for, besides Johnston already mentioned, who was a Scotch physician, practising at the courts of James and Charles I. Mnemonics are frequently mentioned by the great Chancellor Bacon, as in his *Treatise on the Advancement of Learning*; his *Natural History*, wherein he states, "The brains of some creatures, when their heads are roasted, taken in wine, are said to strengthen the memory: as the brains of hares, hens, deer, &c. and this faculty seemeth to be incident to those creatures that are fearful." In the tract *De Augmentis Scientiarum*, Bacon recommends theatrical action as an assistant to memory, and also alludes to the system of Simonides as founded on the theory of emblems, by saying, "Emblem reduceth conceits intellectual to images sensible, which always strike the memory more forcibly, and are therefore the more easily imprinted, than intellectual conceits." In the *Novum Organum* the science is again mentioned under the appellation of "Order or Distribution in respect to places, furniture, persons, animals, plants, words, letters, characters, &c."

Dr. Thomas Fuller, the author of the *History of the Worthies of England*, was also an adept at this art; he could repeat five hundred strange words after twice hearing them, and make use of a sermon verbatim, if he once heard it: after one inspection, he told in exact order both forwards and backwards the name of every sign from Temple Bar to the furthest part of Cheapside, in the city of London: he would write the first words of a number of lines near the margin of a sheet of paper, then by beginning at the head, would so completely fill up every line, and without spaces, interlineations, or contractions, so connect the whole, that the sense would be as perfect, as if regularly written in the ordinary way.

The following works were also expressly published on this sub-

ject: *Mnemonica*, or the Art of Memory, drained out of the pure Fountains of Art and Nature, digested into three books: also a *Physical Treatise of Cherishing Natural Memory*; diligently collected out of divers Learned Men's Writings. By John Willis, Batchelour in Divinity, 1661.

This author's method commences with rules for remembering common affairs, next words, then phrases, afterwards sentences, and long speeches. The second book treats of remembering without writing, next by certain verses purposely borne in mind, and by extempore verses. The third treats of *Repositories*, in which is a print of an imaginary building of hewn stone in form of a theatre, where all things intended to be remembered are supposed to be arranged in order, and he gives various specimens of ideas to exemplify his plan.

The Art of Memory, a Treatise useful for all, especially such as are to speak in public. By Marius D'Assigny, B.D. 1699.

This gentleman's mode begins with a chapter of the soul or spirit of man, and in the succeeding chapters, after treating of memory, temper, &c. he gives in the sixth a number of receipts for cleansing the hair, comforting the brain, and strengthening the memory, by means of plaisters, ointments, and powders; and in his other chapters proceeds with some instructions for remembering words and things; as, for instance, he states, that "others, instead of a house, palace, or building, have chosen such beasts as answer to all the alphabetical letters in the Latin tongue, dividing every one into five parts, viz. head, fore feet, belly, hinder feet, and tail, so that by this means the fancy may have one hundred and fifteen places to imprint the images of memorable things."

Heidegger, who about the year 1740 styled himself *Surintendant de plaisirs d'Angleterre*, at the Opera in the Haymarket, excelled Dr. Fuller, by being able to repeat the names of all the signs in their due order on each side of the way from Charing Cross to Aldgate, a space containing near one thousand four hundred houses, most of which at that period had signs.

Dr. Rees, editor of Chambers's *Cyclopædia*, says, "Mnemonic tables exhibit in a regular manner what is to be remembered of the same subject. And although the sciences ought to be taught scientifically as much as possible, and every thing should so be placed as to be intelligible and demonstrable from what has proceeded, yet tables ought not to be rejected, as they are helps to retain the doctrines of which the mind has had sufficient evidence. In such tables the properties of things are to be expressed concisely; illustrations and demonstrations should be left out, as the proposition should have been made sufficiently clear and certain before it is registered in the table—hence the contents of such tables ought only to be definitions and propositions relative to the subject. If a subject require a long table, it may be subdivided into smaller, by making first one of the most general heads, and referring from each of these to a separate table; by this means the order and connection of the whole will be preserved. Such

tables would produce a local and artificial memory, of great use to the retention and recollection of things; they would greatly facilitate a distinct view of the properties of their subjects, and facilitate recapitulation. Besides, as the expressions used in such tables ought to be concise, so as just to excite the idea of the object to be remembered, soon after that idea has been acquired; after (some time) a certain obscurity will be found in perusing the tables, which will give timely warning that our ideas begin to fade, and that they ought to be renewed; and this may be done without much trouble, if not delayed too long."

"Men complain of nothing more frequently (says Beattie in the *Theory of Moral Science*) than of deficient memory: and indeed every one finds, that, after all his efforts, many of the ideas which he desired to retain have slipped irretrievably away; that acquisitions of the mind are sometimes equally fugitive with the gifts of fortune; and that a short intermission of attention more certainly lessens knowledge than impairs an estate. To assist this weakness of our nature, many methods have been proposed; all of which may be justly suspected of being ineffectual: for no art of memory, however its effects may have been boasted or admired, has been ever adopted into general use: nor have those who possessed it appeared to excel others in readiness of recollection or multiplicity of attainments. The reader who is desirous to try the effect of those helps, may have recourse to a treatise entitled *Grey's Memoria Technica*, or *Method of Artificial Memory*: but the true method of memory is attention and exercise."

A writer in the *Monthly Magazine* for September, 1807, under the signature of *Common Sense*, tells us the *Art of Mnemonics* is founded simply on the powers of association in the human mind. Every person who has twice travelled the same road, will probably have brought to his recollection, during the second journey, the feelings of his mind, the subjects of conversation, and other trivial incidents which occurred during his first journey, the moment he comes again within sight of the successive objects; these recollections will take place exactly in the same order as the objects which bring them again before the mind. All that is wanted to enable us to retrace any set or succession of ideas, is an unvarying continuity of objects with which we can associate them. Any person who wishes to try an experiment on this power of association, need only make use of the succession of rooms, closets, staircases, landing-places, and other remarkable spots or divisions of his own house. Let him apply any word or idea to the several parts, in determined order, and he will find it almost impossible, in recalling the same, not to associate the idea or word previously annexed to each part; for example, a person may learn the succession of the kings of England in ten minutes, by annexing the name of each succeeding monarch to the successive rooms, &c. of the house, regularly descending or ascending; but any other permanent and familiar class of objects will, in general, answer the

purpose better. I was educated in the vicinity of Oxford-street, and the streets running therefrom, south and north, (beginning at Charles-street, Soho-square, and proceeding to Park-lane, and back again on the other side to Hanway-yard,) are the permanent and familiar objects I use for the purpose of successive association. The counties in England, the kingdoms and countries throughout the world, the villages, and other objects on a great road, or the streets of a city, are all well suited to this business of association; and any of them may be taken indifferently by various persons, according to their acquaintance therewith. The greater the variety of ideas connected with this set of objects, which may be called *the associating key*, the more easy and certain is the power of recollection. By this method I once committed to memory, in a single morning, the whole of the propositions contained in the three first books of Euclid, with such perfection, that I could for years afterwards specify the number of the book on hearing the proposition named, and recite the proposition on hearing the number and the book; and have frequently, in mixed companies, repeated backwards and forwards from fifty to an hundred unconnected words, which have been but once called over. To prove the simplicity of the plan, I taught two of my own children to repeat fifty unconnected words in a first lesson, of not more than half an hour's continuance.

CHRONOLOGICAL WORDS

ON DR. GREY'S PLAN.

-
- Creothf*, the creation of the world, 4004 years, A. C.
Deletok, the deluge, 2348.
Babetheop, the building of Babel, 2247.
Argonatlou, the Argonautic expedition, 1359.
Lycurgoudau, the birth of Lycurgus, 926.
Olympois, the Olympic games, 776.
Romput, the foundation of Rome, 753.
Ninevsyd, the destruction of Nineveh, 602.
Marathony, the battle of Marathon, 490.
Alexanderilau, the birth of Alexander, 356.
Ipsiza, the battle of Ipsus, 301.
Cheronitei, the battle of Cheronæa, 338.
Pharsalok, the battle of Pharsalia, 48.
Philippod, the battle of Philippi, 42.
Actita, the battle of Actium, 31.
Jesit, the resurrection of Jesus Christ, A. D. 33.
Herculanoin, the destruction of Herculaneum, 79.
Jerusaloziz, the destruction of Jerusalem, 70.
Romoaz, Rome sacked by Alaric, 410.
Romopy, Rome being taken by Odoacer, 470.
Mahomupa, the birth of Mahomet, 571.
Mahomaudd, the Hegira of Mahomet, 622.
Mahomsid, Mahomet's death, 632.
Jerusalstau, Jerusalem taken by Omar, 636.
Charlemoife, the birth of Charlemagne, 742.
Charlemeiysz, Charlemagne crowned at Rome, 800.
Alfreionz, Alfred divided England into counties, &c. 890.
Canutazap, Canute became king of England, 1017.
Macbazoy, Macbeth usurped the throne of Scotland, 1040.
Williazsau, England conquered by William of Normandy, 1066.
Crusadazoul, the first crusade commenced, 1095.
Henrag, Henry I. commenced his reign, 1100.
Ghibelaglo, the Ghibelines and Guelphs disturbed Italy, 1154.
Jerusalagkoi, Jerusalem taken by Saladin, 1187.
Constantinopladyd, Constantinople taken by the French and Venetians, 1202.
Turkadouk, the Turkish empire commenced under Othman, 1298.

- Bannockataf*, the battle of Bannockburn, 1314.
Crecatos, the battle of Crecy, 1346.
Poicatlan, the battle of Poitiers, 1356.
Otterbateik, the battle of Otterburn, 1388.
Tamerlafyd, the victory of Tamerlane at Angoria, 1402.
Agincourafal, the battle of Agincourt, 1415.
Columbafoud, Columbus discovered Hispaniola and Cuba, 1492.
Cabotafoun, Sebastian Cabot landed in North America, 1499.
Maximilalyz, Maximilian divided Germany, 1500.
Lutheralltoi, Luther commenced the Reformation, 1517.
Charlalbou, Charles V. elected emperor, 1519.
Rhodalde, Rhodes taken, 1522.
Pavaldu, the battle of Pavia, 1525.
Romaldoi, Rome taken by Charles V. 1527.
Passalud, the treaty of Passau, 1552.
Vervalouk, the peace of Vervins, 1598.
Pragasez, the battle of Prague, 1620.
Barbadasel, the planting of Barbadoes, 1625.
Lutzasid, the battle of Lutzen, 1632.
Westphalasok, the treaty of Westphalia, 1648.
Nimegbaupei, the peace of Nimeguen, 1678.
Revolaskei, the revolution in Britain, 1688.
Gibraltapzo, Gibraltar taken by Admiral Rooke, 1704.
Blenheiboifyf, the battle of Blenheim, 1704.
Malplaboizou, the battle of Malplaquet, 1709.
Dettinapot, the battle of Dettingen, 1743.
Fontenboifu, the battle of Fontenoy, 1745.
Mindenaplou, the battle of Minden, 1759.
Grenadapoin, Grenada taken by the French, 1779.
Bastilapkou, the Bastile destroyed, 1789.
Louisapni, Louis XVI. guillotined, 1793.
Camperdapnoi, the Dutch defeated off Camperdown, 1797.
Nilapnei, the battle of the Nile, 1798.
Seringapnou, the taking of Seringapatam, 1799.
Trafalgakyl, the battle of Trafalgar, A. D. 1805.

CHRONOLOGICAL EXERCISES

ON DR. GREY'S METHOD OF ARTIFICIAL MEMORY.

Form memorial words expressive of the æra of the building of Babel, 2247 years before Christ.

The building of Thebes, 1493.

The building of Corinth, 1320.

The building of Tyre, 1252.

The burning of Troy, 1184.

The building of Carthage, 869.

The foundation of Byzantium, 658.

The taking of Babylon by Cyrus, 538.

The battle of Salamis, 480.

The battle of Mantinea, 363.

The battle of Arbela, 331.

The taking of Corinth by the Romans, 146.

The battle of Pharsalia, 48; and the death of Julius Cæsar, 44 years A. C.

The commencement of Trajan's reign, A. D. 98.

The commencement of Aurelian's reign, 270.

Charlemagne sole monarch of France, 772.

The battle of Roncevalles, 778.

The commencement of the reign of Alfred, 872.

The commencement of the reign of Canute, 1017.

The commencement of the reign of Stephen, 1135.

The commencement of the reign of Margaret of Norway, 1286.

The battle of Angoria, 1402.

The battle of Barnet, 1471.

The revolution in England, 1688.

The battle of Dettingen, 1743.

The siege of Gibraltar, 1779.

The destruction of the Bastile, 1789.

The union between Great Britain and Ireland, 1800.

The surrender of Alexandria to the British troops, 1801.

THE USE OF THE INDEX

THE following Index may be useful in two respects; either as it will serve to try the proficiency of the learner, who may exercise himself in resolving and explaining the Memorial Words, thus separated from their proper classes, and intermingled with each other, (which will at the same time be a means to fix them the better in his memory;) or, as it may be to those who are a little acquainted with the art, but have not charged their memories with the *technical* lines, a *ready help* to answer many questions in chronology, geography, history, &c. without the trouble of searching for them in the tables: to make which the easier in the historical and chronological part, it was thought proper to add a letter or two at the end of each word; by the help of which, and the beginning of the words together, any one, who is but tolerably acquainted with history, and is master of the general key, will readily know what the words stand for. The principal abbreviations are as follow:

| | |
|---|-------------------------|
| AB. Archbishop of Canterbury. | HP. High Priest. |
| Ær. Æra or epocha. | J. Judge of Israel. |
| B. Battle. | K. King. |
| B R. Bishop of Rome. | K Ass. King of Assyria. |
| C. Council. | KB. King of Babylon. |
| Ep. Epistle, <i>i. e.</i> the time of writing it. | KE. King of England. |
| Ev. Evangelist. | KEg. King of Egypt. |
| ER. Emperor of Rome. | KJu. King of Judah. |
| EE. Emperor of the East. | KIs. King of Israel. |
| EW. Emperor of the West. | K M. King of Media. |
| F. Father. | K Ma. King of Macedon. |
| H. Heretic, Schismatic, &c. | K P. King of Persia. |
| | K R. King of Rome. |

| | |
|--|--|
| K S. King of Syria. | Ph. Philosopher. |
| L. Lawgiver, Learned Man, Author, &c. | Po. Poet. |
| Leg. Legate. | Pr. Prophet. |
| Mart. Martyr. | Q. Queen. |
| P. Pope. | W. War. |
| Pa. Patriarch. | = different Names of the same person. |

Those words which have no letter at the end of them, denote some fact in history ; as *Abaneb*, the calling of *Abraham*.

The Italic letters represent the year before or after Christ. The small Capitals *m* and *p* in the middle of a word denote the year of the world, or of the Julian period, as *Troyvilita*, &c.

Be careful to give the right pronunciation ; and note, that the accent, unless where otherwise marked, or when the penultima, or last syllable but one, is long by position, is always on the antepenultima, or last syllable but two.

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^a This and several other words in the *Memorial Lines* are contracted, as Abmets, Al-Sédd, &c. &c.

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THE
CONSTRUCTION AND USE
OF THE
GEOGRAPHICAL WORDS.

OF words consisting of two parts in the same character, joined with an hyphen, the first part denotes a city, town, people, &c. in a kingdom, region, or province, denoted by the latter: the words in *Italic* letters signifying places in ancient Geography; the words in *Roman* letters, places in modern Geography. Thus, *Abdér-thra*; Abdera, a town in ancient Thrace. Aginc-art; Agincourt in *Artois*.

Words in a parenthesis denote that the place represented by the first syllable or syllables, is one of those represented by the latter, as, (Antig-lee) *Antigur*, one of the *Leeward* Islands; (Cub-ant) *Cuba*, one of the *Antilles*.

The letters N. E. S. W. either following or in a word, denote the situation of a place; as, Antill-luc S, the *Antilles* Islands, South of the *Lucayos*; Madéir-barb W. *Madeira* Isles, West of Barbary; *AmNemoab*, the *Ammonites* resided on the North East of Moab. S preceding a word signifies Saint.

The letters G. S. denote Sacred Geography.

A small capital at the end of a word denotes a particular portion or division of the region designed by the preceding letters; as *Æqui-latn* points out that the *Æqui* dwelt in *Latium Novum*; *Batch-tartar*, that *Batchiserai* is situated on the peninsula of Little Tartary.

Italics joined with an hyphen denote the latitude and longitude of a place: as, *Agrék-oit*, the latitude of *Agra* 28 deg. the longitude 73.

Italics joined with a comma denote the proportion of the kingdom, &c. to Great Britain; as, *Germt,ut*, Germany to Great Britain as 3, 53 to 1.

Italics joined without an hyphen generally denote the distance from London or Jerusalem; as, *Pardel sc.* Paris from London about 225 miles; *Antiochig*, Antioch from Jerusalem about 300 miles.

Syllables joined with this mark = denote correspondent places of ancient and present geography: as *Ach=livad*, the ancient *Achaia*, the present *Livadia*.

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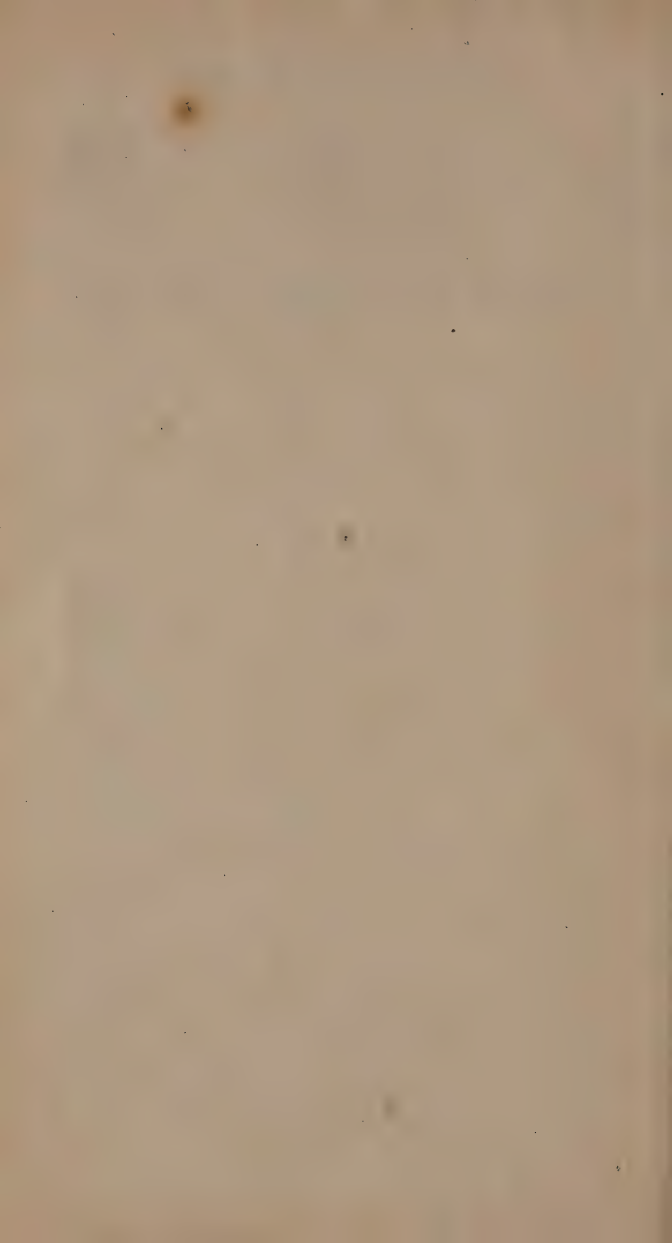
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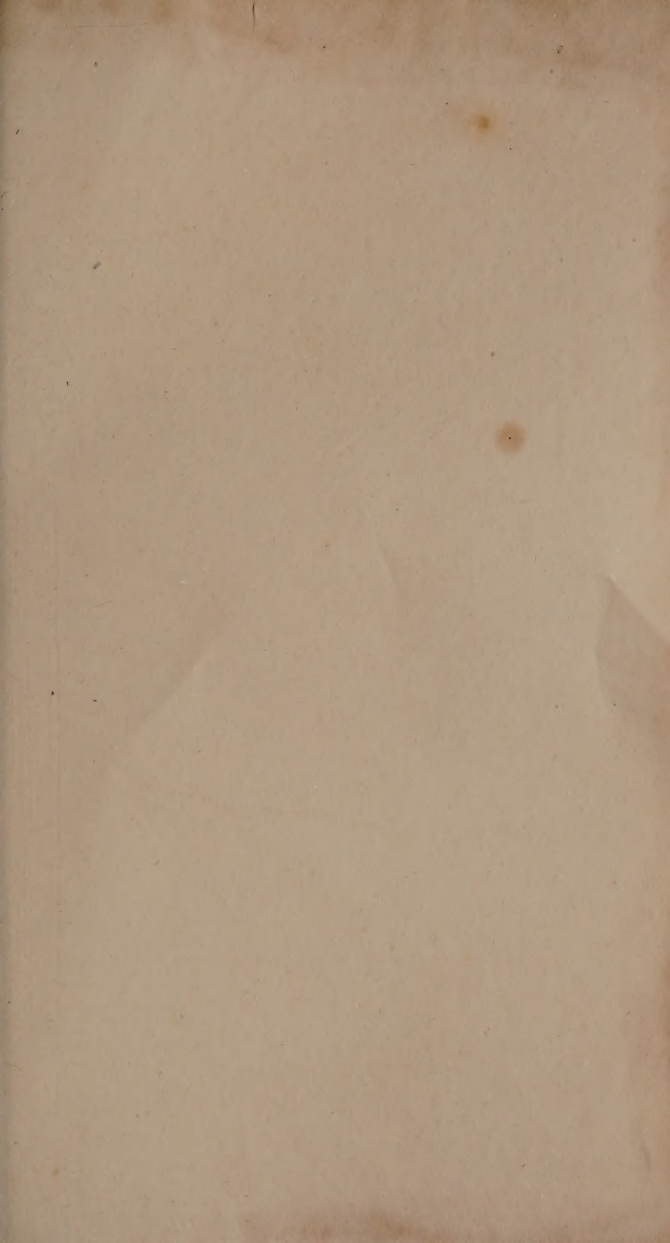
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N. B. These Indexes do not contain quite all the words, but it is hoped enough is inserted to answer every useful purpose.

FINIS.







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